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Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 1 January 1984

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BOTANICAL GARDEN

CHAPTER NEWS

Blue Mountain

--- No scheduled meetings or field trips for January.

Corvallis

9 Jan., Mon. Meeting, 7:30 p.m. Cordley Hall, Rm. 2086, Oregon State University, Corvallis. ENDANGERED PLANTS OF SOUTH-CENTRAL OREGON by Steve Shelly.

14 Jan., Sat. Workshop, 10:00 a.m. Cordley Hall, Rm. 1070, OSU, Corvallis. HOW TO KNOW THE SEDGES, with Charlie Halpren as our guide.

Emerald

Nominating Committee: As prescribed in our by-laws, Emerald Chapter will be electing new officers in February or March. We are in the process of forming a nominating committee and will be accepting nominations at the January meeting. If you are or know someone who is anxious to carry the banner for native plants, be they achlorophyllous or otherwise, please come to the January meeting or contact Leighton Ho.
Field trips to proposed wilderness areas: Sunset Magazine is planning a major article on proposed wilderness additions and is soliciting field trips to these areas. If you would like to lead a field trip into any of the areas presently under consideration (e.g. Hardesty Mountain, Coast creeks, Old Cascades, etc.), come to the January meeting or contact Leighton Ho soon after. He will probably lead a trip into Waldo Meadows in the Waldo Country.

9 Jan., Mon. Meeting, 7:15 p.m. Red Cross Building, 150 E 18th, Eugene. PROWLING FOR PENSTEMONS with Ken & Robin Lodewick.

6 Feb., Mon. Meeting, 7:15 p.m. Red Cross Building. MYSTERIES OF THE MONOTROPOIDEAE by Dan Luoma (tentative).

High Desert

31 Jan., Tues. Meeting, 7:30 p.m. Cascade Natural Gas Community Room, Bend. David Danley will present a program on the GRASSES OF CENTRAL OREGON.

--- There will be no meeting in Feb.

Mid-Columbia

4 Jan., Wed. Meeting, 7:30 p.m., Mosier School.

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Portland

10 Jan., Tues. Meeting, 7:00 p.m. First United Methodist Church, 1838 SW Jefferson, Portland. Julie Kierstead, from the Berry Botanic Garden, will discuss the OREGON RARE & ENDANGERED SEED BANK, a project she has been working on for the last year. A slide show will accompany the presentation.

21 Jan., Sat. Workshop, 10:00 a.m. First United Methodist Church (address above). DODECATHEON & ARTEMISIA IN THE COLUMBIA GORGE, with Russ Jolley. Bring hand lens & notebook.

28 Jan., Sat. Workshop, 10:00 a.m. First United Methodist Church. INTRODUCTION TO GRASSES, with Lois Kemp. Bring hand lens & notebook.

4 Feb., Sat. Workshop, 10:00 a.m. First United Methodist Church. UP & DOWN THE FAMILY TREE, with Julie Kierstead, who will try to explain why plant families are arranged in a particular order in Hitchcock & other floras. Bring hand lens, notebook, & open mind.

11 Feb., Sat. Workshop, 10:00 a.m. COMPOSITES, with Anne Kowalishen, who invites us to bring examples, dried or otherwise. Bring hand lens & notebook, also.

Siskiyou

12 Jan., Thurs. Meeting, 7:30 p.m. Room 171, Science Bldg., SOSC. Two multi-image slide shows, DAVID DOUGLAS - THE GRASS MAN and THE KALMIOPSIS will be presented by Bob Cooper, associate professor of forestry, & Shirley Bridgham, media center director of SW Oregon Community College. The program is Douglas' life & travels as an early botanical explorer in western N. America, and the unique landscape & plants of the Kalmiopsis country in SW Oregon.

Willamette Valley

16 Jan., Mon. Meeting, Carrier Room, First United Methodist Church, 600 State St., Salem. Use Church St. entrance 6:45 p.m. PLANNING SESSION FOR MOTHERS DAY FLOWER SHOW. All interested chapter members welcome. 7:30 p.m. Chapter meeting. La Rea Johnston, Assistant Curator of the Herbarium, Oregon State Univ., will present part two of PIONEER BOTANISTS OF THE NORTHWEST. Earlier in the year she presented part one, which the group enjoyed very much, so we are looking forward to the 2nd part.

NOW IS THE TIME to renew your NPSO membership if you have not already done so. Use the 2-sheet membership stapled into this month's or last month's issue of the Bulletin, and SEND BOTH COPIES to Mary Falconer, NPSO membership chair. If she receives only one copy, she must rewrite the renewal onto a new 2-sheet form, which is very time-consuming when there are a number to be redone.

WELCOME, new members

CORVALLIS CHAPTER
Jean Townes

EMERALD CHAPTER
William Barber

PORTLAND CHAPTER
Kristine (Mrs. C. Gordon) Tupling
Mary Agnes Hendren

WILLAMETTE VALLEY CHAPTER
Addie Dyal

NPSO BOARD MEETING JANUARY 21 IN SALEM

The Board of Directors of NPSO will meet Saturday, January 21, at 1:00 p.m. at the State Forestry Office, 2600 State Street, Salem. The major item of business will be acceptance of an annual budget. Rick Brown & Jean Siddall will preview the work of her R/E committee for '84.

I will mail a map & an agenda to all Board members around Jan. 7. Please call me at 345-6241 if you wish to propose agenda items. I encourage Chapter R/E chairs, members of the 1983 State Legislative Committee, and newly-nominated officers & board members to attend. And, of course, any NPSO member is always welcome to attend any Board meeting.

Rhoda Love
NPSO President

MARK YOUR CALENDARS--ANNUAL MEETING IN JUNE

NPSO's annual meeting will be at Sunriver on June 1, 2, and 3. Watch for more information in future Bulletins (see also the October 1983 Bulletin, page 9.

President's letter:

Happy 1984, Fellow NPSOers!

Our nominating committee has chosen a fine slate of new officers and in a few short months our society will have a new president. I've enjoyed my tenure very much and will be sincerely sorry to leave office. However, NPSO will be in great hands, our society will continue to be strong and to grow and I'll be in there contributing as an active member.

I want to take this opportunity, at the start of a new year, to say how grateful I am for the splendid help I have received from all of you---officers, board members and members---during this past year and a half.

Our Bulletin editors, previously Linda Vorobik and now Julie Kierstead, have done a superb job of producing, monthly, an attractive and well-edited newsletter that has been packed with readable, up-to-date items as well as with the nitty-gritty of society business. And thanks to all of you who have contributed articles for the Bulletin--Herm Fitz, Russ Jolley, Jimmy Kagan, and all the rest. (Linda Vorobik, before she left for Texas also designed our notecards and produced our 1983 Membership Roster.)

Eight chapter presidents from throughout the state have always been extremely cooperative in carrying out those sometimes mundane tasks that make our society hang together statewide. These and all our board members have traveled many miles to attend our thrice-yearly board meetings.

Charlene Simpson and her Emerald Chapter committee set up a fine Annual Meeting for us in Eugene in May, 1983, and Kathleen Cooper and the High Desert group are planning another meeting for us all at Sun River next June.

The following folks have been indispensable to the smooth running of our society: Membership Chair, Mary Falconer, R and E Committee Chair, Jean Siddall, Shep Wilson who recently computerized our membership list, Joyce Beeman who handled distribution of the Bulletin, Nadine Smith our hard-working Treasurer who also designed the trillium logo on our T-shirts, Florence Ebeling who took over the Secretary's post, Marge Ettinger who headed the Nominating Committee in 1983 and Veva Stansell who did that in 1982, Rick Brown our Legislative Chairman, Jean Huffstutter, Annie Kowalishen, Tammy Maurer, Daphne Stone, and Gaylee Goodrich who worked on our TV film, Charlene Holzwarth who distributes our notecards.

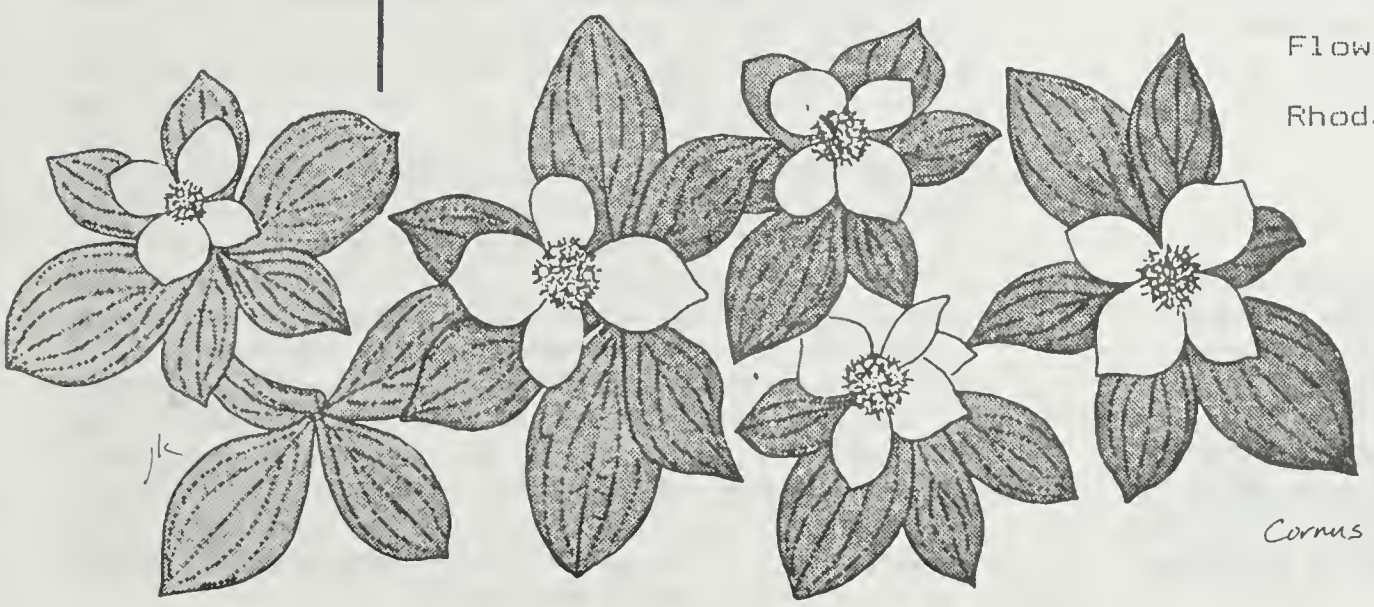
Thanks too, to our numerous environmental watchdogs (you know who you are!) who have alerted us to threats to floras and habitats while there was still time to act.

And, of course, a big thank you to all of you members out there throughout Oregon who renew memberships on time, buy notecards and T-shirts, send articles to our editor, come to Annual Meetings and watch out for the native plants in your part of the state.

Any list of this kind always leaves out some very important people, and so to all of the above and to anyone I have inadvertently forgotten, a big THANK YOU TO ALL AND TO ALL A HAPPY NEW YEAR!!

Flowers forever,

Rhoda Love, President



Cornus canadensis

Jean Davis Award

NPSO will award a $1,000 scholarship to a plant systematics or plant ecology student, to be used for tuition at an Oregon college the following academic year. Applications must be received by April 1, 1984; the award will be made by May 1, 1984. Applicants should refer to the October 1984 issue of the NPSO Bulletin for rules for application.

Jean Davis Memorial Awards are funded by members' donations to the scholarship fund. Interest from the fund is apportioned to as many awards of one thousand dollars each as is possible.

Donations to the Jean Davis Memorial Award Fund and applications for the Award should be addressed to Mary Falconer, Award Committee Chairman, 1920 Engel Ave. NW, Salem, OR 97304.

Nominations in

In accordance with NPSO By-Laws, the following nominees for NPSO state offices have been forwarded by the nominating committee (Marge Ettinger, Chair; Bob Frenkel, Mike Kaminski, Doris Ashby, Ruth Hansen, Andy Kier, & Augusta Rockafellar:

President: Franklin (Herm) Fitz
Vice-president: Michael D. Fahey
Secretary: Jeanne Huffstutter
Treasurer: Marjorie Ettinger

Board of Directors:

Floyd Hendron, Portland Chapter
Barbara Robinson, High Desert Chapter
Rhoda Love, Emerald Chapter
Veva Stansell, Siskiyou Chapter
Naoma Neyerlin, Siskiyou Chapter
Gordon Larum, Siskiyou Chapter
Susan Kephart, Willamette Valley Chapter

Resumes of nominees will appear in the February Bulletin; ballots will be included in the March issue.

CALL FOR ADDITIONAL NOMINEES: Nominations may still be made. Names of nominees (consenting) should be forwarded to the nominating committee, accompanied by the signatures of five or more NPSO members and by the nominee's resume. Resumes will be published in February with the other resumes.

NOW AVAILABLE: Wagner's 1984 Willamette Valley Nature Calendar, a delightful compendium of local natural history information, holidays of diverse origin, and garden advice, illustrated with large wildflower drawings suitable for coloring. What other calendar would notify you when the middle of mountain beaver breeding season is at hand (Feb. 3)? Calendars are available from Dave Wagner, Box 30064, Eugene, OR 97403 for $4.00 each. Dave is a member of the Emerald Chapter of NPSO.

WILDFLOWER BROCHURE AVAILABLE FOR SALEM AREA

Willamette Valley Chapter of NPSO and the City of Salem Parks and Recreation Department have just published the Salem Wildflower Check List. This leaflet lists 300 native and introduced flowering plants common to the Salem area, together with their flowering season, and is based on the comprehensive flora done a few years ago by BLM botanist Peggy Steinbrugge. This handsome leaflet will be used in the City's Nature Interpretive program and made available upon request to Salem visitors by the Salem Area Chamber of Commerce. Members may obtain single copies free of charge by sending a legal-sized self-addressed stamped envelope to the chapter at 5084 Skyline Road South, Salem, OR 97306.

HARDY PLANT SOCIETY STUDY WEEKEND #5

A gardener's version of heaven - "Special Plants for Special Places" - will take place in Portland, Oregon's Western Forestry Center this July 6, 7, and 8. Inspiring speakers, slide shows, garden tours, sales of plants, books, seeds, displays of botanical art & photography will delight you. Keynote speakers include Beth Chatto, English gardenmaker, nurserywoman, author; Pamela Harper, garden writer and photographer; Brewster Rogerson, clematis specialist, and David Palmer, Director of Berry Botanic Garden. For information about registration and lodging, write quickly to Kathleen Williams, 1205 SW Harbor, Lincoln City, Oregon 97367, as space will be limited.

SIX WINTER WORKSHOPS - PORTLAND CHAPTER

All at 10 a.m., First United Methodist Church, 1838 SW Jefferson St., Portland. Bring your hand lens (there'll be extras to share), notebooks, for six instructive "indoor field trips".

21 Jan., Sat.	Dodecatheon & Artemisias in the Columbia River Gorge. Russ Jolley.
28 Jan., Sat.	Introduction to Grasses. Lois Kemp.
4 Feb., Sat.	Up & Down the Family Tree. Julie Kierstead.
11 Feb., Sat.	Composites. Anne Kowalishen (who invites us to bring examples, dried or otherwise).
---	No Sat. class this weekend. A potluck social meeting is planned instead on Sunday, Feb. 19, at Leach Garden. Time & details later.
25 Feb., Sat.	The Mustards. Jean Siddall.
3 Mar., Sat.	Mosses of the Columbia River Gorge. Faith Mackaness.

R/E News

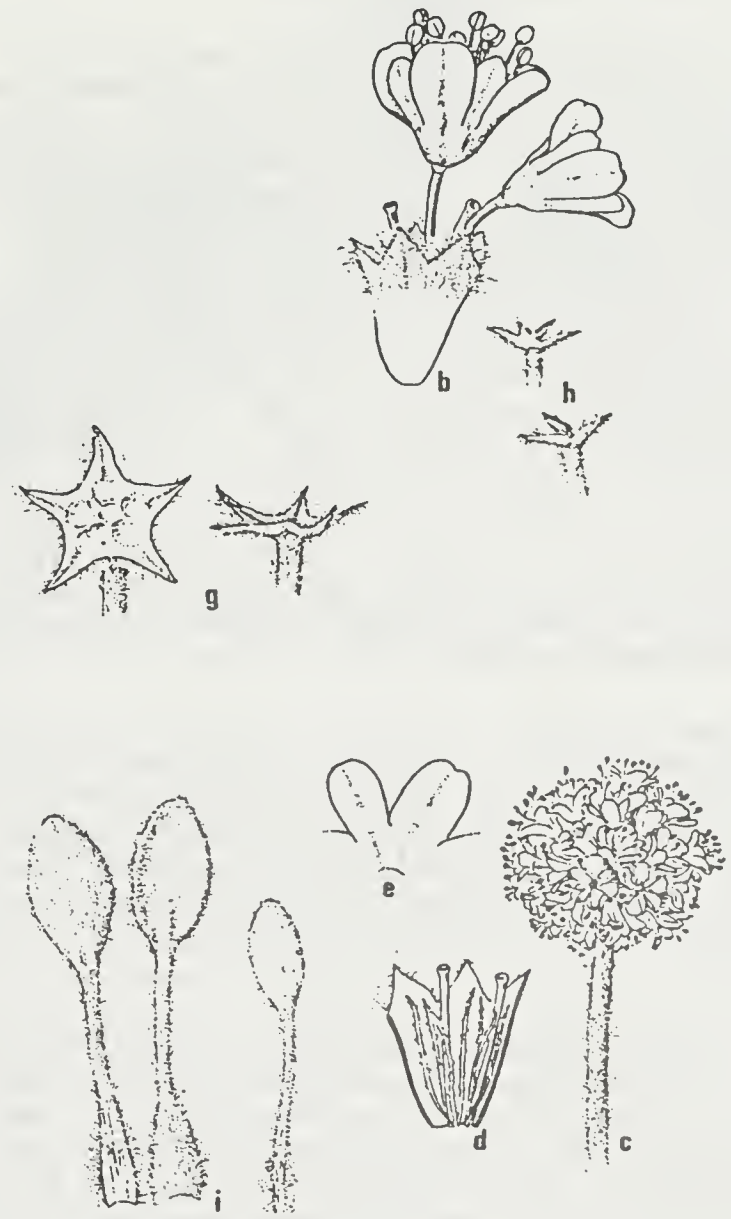
Inasmuch as there are about forty plants on the Oregon R/E list which are not to be found in any of the floras (such as Peck's *Manual of the Higher Plants of Oregon* or Hitchcock & Cronquist's *Flora of the Pacific Northwest*), and inasmuch as it is difficult to identify a plant without having a description or a picture of it, the R/E corner in the next few issues will be devoted to descriptions of the species which have been published somewhere in the literature, but which aren't yet included in floras of Oregon or the NW.

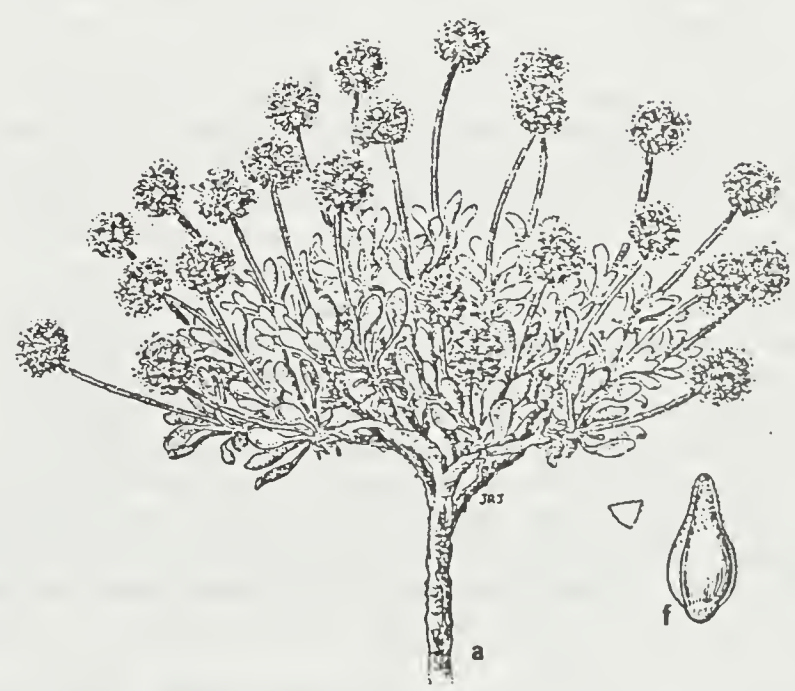
* * *

ERIOGONUM CROSBYAE Reveal. It seems appropriate that *Eriogonum crosbyae* (named after Virginia L. Crosby, longtime NPSO member and botanist for the Lakeview BLM district) be first, since there have been requests for a description of Ginny's buckwheat, and she has been so involved with R/E species. The following description is from: Reveal, James L., 1981. Notes on endangered buckwheats (*Eriogonum: Polygonaceae*) with three newly described from the western United States. Brittonia 33(3): 441-444.

> Low, matted, cespitose perennial herbs with a highly branched woody caudex forming a mat (0.8) 1-2.5 dm across, this arising from a stout, woody taproot; leaves basal, persistent, the old leaf-blades and bases often covering the upper 1-4 cm of the caudex branch, the leaf-blade oblanceolate to narrowly elliptic, 5-15 mm long, 1.5-4 (5) mm wide, densely white-tomentose on both surfaces, only slightly less densely so above in some, not glandular, the apex acute or nearly so, the base cuneate, the margin entire and plane but slightly thickened, the petiole 0.3-1 (1.2) cm long, tomentose, the petiole-base elongate-triangular, 2-2.5 mm long, 1-1.5 mm wide, tomentose without, sparsely tomentose to glabrous within; flowering stems scapose, weakly erect, (1.5) 3-5 (7) cm long, floccose; inflorescences capitate, the head 5-8 mm across; bracts mostly ternate, scale-like, linear to narrowly triangular, 1.5-2 mm long, 0.5-1 mm wide, sparsely floccose without, glabrous within, connate basally; peduncles lacking; involucres congested, 5-7 per head, campanulate, rigid, 2-3 mm long, minutely fringed with capitate, gland-tipped cells, the pedicels 2-3.5 mm long, glabrous; flowers yellow, the tepals with greenish-yellow midribs and bases turning reddish with age, 1.5-2 mm long, glabrous within and without except for minute glands along the midribs within, all essentially similar, ablong to ablong-obovate, those of the outer whorl 1-1.2 mm wide with the apex rounded to retuse, those of the inner whorl 0.7-0.9 mm wide with the apex rounded, united about ¼ the length of the flower; stamens slightly exserted, 1.5-2 mm long, the filaments sparsely pilose basally, the anthers yellow, oblong, 0.4-0.5 mm long; achenes light brown, 2 mm long, glabrous, the subglobose base tapering to a long, 3-angled beak . . . *Eriogonum crosbyae* is outwardly similar to *E. prociduum*, a local species found to the west in more mesic sites on volcanic soils. The two may readily be distinguished by the scapes, pubescent in *E. crosbyae* and glabrous in *E. prociduum*. The more western *E. cusickii* . . . differs from both *E. crosbyae* & *E. prociduum* in having a branched, not capitate, inflorescence.

* * *





Eriogonum crosbyae. A. Habit. B. Involucre with flowers. C. Flowering head. D. Involucre with pedicels & bractlets. E. Tepals. F. Achene. G. Bracts with 5 lobes. H. Bracts with 3 lobes (lower) & 4 lobes. I. leaves with upper (left) & lower surfaces. Drawing by J.R. Janish.

LEGISLATIVE COMMITTEE REPORT

Recently, Rhoda suggested that I prepare a brief recap of our efforts to enact state endangered species protection during the last legislative session. Our first meeting was held in Salem in early December, 1982, to try to reach agreement on some of the perennial questions concerning a listing process, species coverage, agency responsibility, etc. Another crucial topic was how best to approach the legislature in the limited time available. In attendance, along with Rhoda and other NPSO members, were representatives from Portland Audubon, Oregon Environmental Council, and Sierra Club. Subsequent meetings in Portland and Salem included additional NPSO members (Jean Siddall and Ann Whitmyer) as well as the Oregon Natural Heritage Program and the Oregon Natural Resources Council. Much useful discussion resulted, and I greatly appreciate the time and effort of those involved.

From these meetings, we agreed that efforts must be aimed toward protection of both plants and animals (this based both on biological integrity and the realization that inclusive coverage would bring the broadest possible public support), and that the Oregon Department of Fish and Wildlife would be the most desirable "home" for endangered species responsibilities.

We then began to make contacts with legislators and state agencies (special thanks, here, to Liz Frenkel for her invaluable assistance and advice), as well as people who had undertaken similar efforts in the past. Based on these contacts, and in light of the legislature's concern with budgetary matters, the strength of potential opposition and our late start, we were forced to realize that not only would we almost certainly fail, but fail badly, jeopardizing future efforts.

Reluctantly, Rhoda and I decided that, taking the long view, the wisest course was to regroup and redirect our efforts toward the 1985 legislature. Any drive toward that goal should begin now, at the latest. We need to reestablish agreement within NPSO and among our allies in other conservation groups on the general goals we want to achieve, as well as specific actions necessary to achieve them. We will need to contact those who can provide insight into the success or failure of various existing legislation in other states, and we need very much the energy and insights of those with an understanding of the workings of our state legislature and agencies. I encourage anyone who can offer advice or assistance to contact me or Rhoda, soon. Interested members are also invited to attend the NPSO Board meeting in Salem on January 21st.

Rick Brown
Legislative Chair

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.
Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.
Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.
Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.
Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.
Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.
Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.
Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.
William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.
Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

WREN PRAIRIE PROTECTED

The Nature Conservancy and the Bureau of Land Management have entered into an agreement which will preserve a 10 acre tract of native Willamette Valley flora known as Wren Prairie. Located in Benton County near the town of Wren, this BLM parcel stood isolated and disjunct from other BLM ownership and was identified for asset land sale. In 1982, TNC had discovered and targeted this site for protection as one of the few remaining areas in the Valley to be dominated by native grasses and forbs, and in particular by red fescue (*Festuca rubra*). Upon learning of these unique features, personnel in the State and Salem District Offices of the BLM moved to sell the property to TNC under the Recreation and Public Purposes Act for management as a natural area preserve. This has occurred. Wren Prairie will now be protected in perpetuity as an example of our vanishing native flora and as a place where valuable scientific and educational studies can be undertaken. Special thanks goes to NPSO members Kenton Chambers and Dave Wagner, NPSO President Rhoda Love and to several Corvallis Chapter members for their timely and concerned letter writing and interest in this area. Without this important support, such action may not have taken place. Bravo!

R/E Seed Bank Readies for Busy '84

Last January the future of Oregon's flora brightened considerably with the establishment of a cryogenic seed bank for rare, threatened, and endangered vascular plants. The seed bank, funded by a grant from the Fred Meyer Charitable Trust, will preserve a representative genetic sample of each rare and endangered species in the state as insurance against extinction of the species in the wild. It will also serve as a center for research on germination requirements of native plants.

The seed bank is housed at the Rae Selling Berry Botanic Garden, five and a half acres in the hills of southwest Portland with over 1600 plant species, including special collections of native northwest plants, alpines, rhododendrons (over 130 spp.), lilies, and primroses (Lilium and Primula). The varied landscape of the Berry Garden grounds, comprising woodlands, rock outcrops, grassy slopes, a stream, and a bog, is ideal for growing a wide selection of Oregon's plants.

But what can a seed bank do? Since loss of habitat is the single biggest threat to Oregon's flora, most of our rarest plants being victims of urbanization or agriculture (including timber and livestock), a seed bank is not an alternative to native ecosystem conservation. Preserving rare species in situ is infinitely preferable to reconstructing populations in a garden, or to their existence only in a seed bank; but there are several reasons why we cannot rely completely on land conservation to safeguard the security of our botanical legacy. For plants with inherently poor reproductive or dispersal ability, simply setting aside a piece of land is not enough to guarantee that their numbers won't continue to dwindle; conserving these plants will probably mean reestablishing historic populations and augmenting those which have shrunk below a critical level. Management of preserves is an art which rests on a base of solid ecological knowledge, which is lacking for many rare plants; no one knows what they need to survive. Chance destruction of a population by flooding, landslide, or freak weather conditions, while of no great consequence to a species with numerous, healthy, widely spaced populations, can be disastrous for a species restricted to a single site, however vigorous it may be there.

But probably the best reason for the seed bank is the urgency of the task. Protection of rare species is a highly political process and, as such, is agonizingly slow. Over a hundred species in Oregon face extinction in the next five to thirty years if present conditions persist. Only three are protected by Federal legislation (listing under Federal law is also a very slow process). Some of these plants will surely be lost

while waiting for protection. The seed bank is essential insurance for these plants on the verge of extinction, and is the natural complement to preservation in the wild.

Fortunately, the technology exists for long-term seed storage with minimal loss of viability. Seed physiology research of the last few decades resulted in recommendation, by the Food and Agriculture Organization of the United Nations in 1975, of "preferred standards" of seed storage for long-term conservation. These standards specify storage at 0°F. (-18°C.) or less, in air-tight containers at a seed moisture content of $5 \pm 1\%$, conditions which are not difficult to meet. Drying the seeds is the most time-consuming part of the procedure, because the air is so humid in western Oregon. In southern California one could simply air-dry the seeds for a few days; here they must be dried in an air-tight cabinet with a large quantity of desiccant, such as silica gel or Drierite® for several weeks. After drying, seeds are packed in air-tight glass vials, labeled, and stored in an ordinary chest freezer. Drying and freezing greatly slow the rate at which the living seed uses its stored food and the rate at which the seed ages, so the seed stays alive but in suspended animation until thawed and rehydrated. A small sample of each seed lot is set aside for germination testing, to make sure the seed is alive and to test the species' response to different germination conditions.

All collecting for the seed bank is done by volunteers, who survey each collection site carefully before harvesting seed. Often two visits to the site are necessary: one to assess the size, extent, and habitat of the population and to verify its identity while flowering; and a second to harvest ripe seeds or fruits. One may find, as I did on returning to a healthy population of several hundred fritillaries, that deer had eaten all but four of the seed capsules (and I'm sure those weren't left on purpose!).

The seed bank needs your help. If there is a special population of plants you've been keeping an eye on for years, but your Congressman doesn't answer your pleas for its protection, you can help ensure its survival by collecting a seed sample for the seed bank. To volunteer, call or write me at the Oregon R/E Seed Bank, c/o Berry Botanic Garden, 11505 SW Summerville Ave., Portland, OR, 97219; (503) 636-4112. I'm planning now for the 1984 field season, and I'll send you collecting instructions, seed envelopes, and other materials you will need.

Silene hookeri

Julie Reinwand Kierstead
Oregon R/E Seed Bank

SAVE THE WALDO COUNTRY

Some of the finest unprotected wild country remaining in the Cascade Range lies just SW of the Three Sisters Wilderness Area. Known as the Waldo Country, this area covers over 90,000 acres of low to medium-elevation old growth forest. Within this area are ten peaks over 5000 ft. in elevation, hundreds of miles of hiking trails, more than sixty named subalpine lakes, and dozens of miles of tumbling trout streams. The N. Fork of the Middle Willamette in particular sustains populations of cutthroat, rainbow, and brook trout, and has been managed since 1974 as one of the few wild trout streams in Oregon. In 1983, the State of Oregon, in recognition of the unique character of the N. Fork and its source, Waldo Lake, added both to Oregon's Scenic Waterways System.

The E. border of the Waldo Country is formed by the incomparable Waldo Lake. Covering more than ten square miles, it is the second largest natural lake in Oregon. Of greater significance is its international recognition as one of the purest bodies of water in the world. With no permanent inlet, it is fed almost entirely by snowmelt and, as a result, the chemistry of its water approaches that of distilled water. Because of the low concentrations of nutrients in the water, the production of algae is very low. (A Secchi disc, used by limnologists to measure transparency of lakes, can be seen at a depth of 125 feet.) Light penetrates the lake to great depths, and an unusual community of liverworts and mosses *(Jungermannia triris & Hygrohypnum* sp.*)* thrives at the astonishing depth of 400 feet. People canoeing or swimming on a calm day may have the eerie sensation of being suspended in air.

The Waldo Country provides for a number of game and non-game animals. Waldo Meadows, the largest of several named subalpine meadows, provides vital habitat for Roosevelt elk. Other wildlife species dependent on large tracts of undisturbed land, and known to inhabit the Waldo Country, are cougar, black bear, wolverine, fisher, and marten. Interestingly, sightings of wolves are alleged, though these shy and elusive creatures are officially extinct in Oregon. The known range of the endemic Oregon Slender Salamander *(Batrachoceps wrightii)* extends in the Western Cascades from the Columbia Gorge to the Waldo Lake area.

In old growth forest of the Waldo Country there are at least four species of non-green flowering plants parasitic on trees via mushrooms (mycorrhizal fungi): the gnome plant *(Hemitomes congestum)*, pine sap *(Hypopitys monotropa)*, candy stick *(Allotropa virgata)*, and the striped coral root *(Corallorhiza striata)*. Among the mushrooms, the choice edible gypsy mushroom *(Rozites caperata)* may be collected in quantity. There is one bizarre mushroom belonging to the genus *Macowanites* which is seldom collected in Lane County, but appears with some regularity in the Waldo area. This mushroom is a gilled mushroom in the process of becoming a puffball; the spores are no longer forcibly discharged and the gills have degenerated into tangled disarray. In boggy places, there are a couple of carnivorous plants: sundew and bladderwort. Also in bogs is the Alaska clubmoss *(Lycopodium sitchense)*, a primitive vascular plant belonging the ancient group of fern allies. Another fern ally can be found in many subalpine lakes of the Waldo Country--Bolander's quillwort *(Isoetes bolanderi)*. Another species of quillwort has recently been shown to possess an unusual photosynthetic pathway called Crassulacean Acid Metabolism (CAM).

There is much scientific interest in the Waldo Country area, and it seems well suited for conduction of research. In addition to published studies on Waldo Lake, there have been at least two other studies in the area: one on the formation of forest soils, and another on fungi which decompose litter in lakes. To the east of Waldo Lake, studies on the ecology of the laminated root rot fungus *(Phellinus weirii* a serious forest pathogen, have been underway since 1975.

The Waldo Country offers a variety of recreational opportunities. The area is studded with dozens of beautiful aquamarine lakes, which provide excellent fishing early and late in the season. Waldo Lake is large enough to allow overnight canoe camping. Late in the fall the area is used by elk hunters who prefer to hunt and track game in the solitude of an unroaded place. In winter the immense back country is open to cross country skiers.

Forest Service protection of the Waldo Country is administrative, and, as such, is subject to bureaucratic whim. Such protection has not prevented the relentless intrus ion of logging. Much of the original Waldo Country has been lost to logging, clearly seen in the fingers of road penetrating the area from the west. Nor has the Waldo Country escaped the recent small hydro rush. Numerous developers are studying the possibility of drawing down Waldo Lake itself to produce electricity, at a time when the Northwest is awash in surplus power, and nuclear facilities are being mothballed.

In March 1983, the U.S. House of Representatives passed a 1.2 million acre Oregon Forest Wilderness Bill which included most of the Waldo Country, but only as "Wilderness Study Area". This summer the Emerald Chapter submitted testimony to Senator Hatfield in favor of incorporating the Waldo Country into the Wilderness System. The Senate version of the Oregon Wilderness Bill was not introduced before the Senate recessed this fall, but Oregon Natural Resources Coalition sources indicate that Waldo Country is not likely to be incorporated in the Senate Bill. Consequently, the Waldo Country Study Group is planning a major campaign to focus attention on this important area. In January there will be a couple of cross country ski trips into Waldo Country, slide shows, etc., and a march and rally at City Hall. Speakers tentatively scheduled include Mason Williams, Jerry Rust, and several Oregon legislators. The march will originate at noon at the EMU courtyard on the University of Oregon campus, Saturday Jan. 25. We hope to have a bagpiper lead us into battle. The rally is scheduled for 1:00 at Harris Hall. Watch the Sunday Register-Guard Oregon Life section for further announcements.

You can help secure Congressional protection for this vital area by writing to Senators Mark Hatfield and Bob Packwood, and letting them know you would like to see the Waldo Country added to the Three Sisters Wilderness Area. In addition, Congressmen Jim Weaver, Les AuCoin, and Ron Wyden need to be thanked for their efforts in the House, and encouraged to support Waldo Country when the bill is finalized in the House-Senate Conference Committee.

Leighton Ho, member
Waldo Country Study Group
2696 Friendly St.
Eugene, OR 97405

WORDS TO KNOW: LET ME COUNT THE WAYS...

Ever want to say "Hey, good-looking!" to a plant in a classical language? Here are sixteen ways to love your leafer:

L. *amabilis*, lovely; *Abies amabilis*

L. *amoenus*, delightful, pleasant, lovely; *Clarkia amoena*

L. *bellus*, pretty, lovely, fine; *Mertensia bella*

Gr. *charis*, loveliness, grace, favor, thankfulness; *Eleocharis*

L. *concinnus*, skillfully put together, beautiful, appropriate; *Lupinus concinnus*

L. *elegans*, ornamented, elegant, beautiful; *Downingia elegans*

L. *formosus*, beautifully formed, comely, handsome; *Aquilegia formosa*, *Lotus formosissimus*

Gr. *habros*, pretty, graceful, dainty, tender, delicate; *Abronia*

Gr. *kallos*, beauty; *Callitriche*

L. *lepidus*, pleasant, elegant, fine; *Lupinus lepidus*

L. *nitidus*, shining, neat, elegant; *Lepidium nitidum*

L. *ornatus*, bedecked, handsome, splendid; *Lupinus ornatus*

L. *pulcher*, beautiful, pretty, fine, lovely; *Crepis pulchra*, *Polemonium pulcherrimum*

L. *speciosus*, beautiful, handsome, splendid, showy; *Penstemon speciosus*

L. *spectabilis*, showy, notable; *Rubus spectabilis*

L. *venustus*, like Venus, lovely, beautiful, elegant, graceful; *Calochortus venustus*

Pinus monticola

NATIVE PLANT SOCIETY OF OREGON

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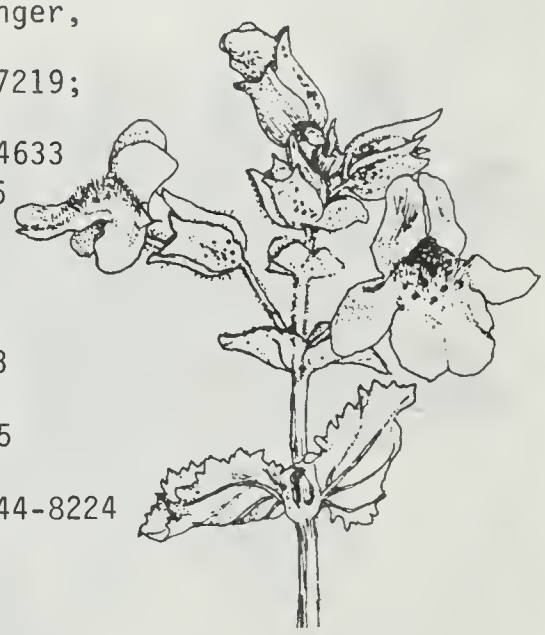

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Mary Falconer, Membership Chair (address above)
Send BULLETIN copy to the editor by the 10th of the month (editor's address listed above).

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To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 2 February 1984

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CHAPTER NEWS

Blue Mountain

--- No scheduled meetings or field trips for February.

Corvallis

13 Feb., Mon. Meeting, 7:30 p.m., Cordley Hall, Rm. 2087, Oregon State University, Corvallis. Be sure to mark your calendar for this outstanding presentation. Dr. Jack Lyford will provide visual transportation to EAST AFRICA LANDSCAPES AS SEEN THROUGH THE EYES OF AN ECOLOGIST. His program covers wildlife & wildflowers. Of special interest will be the unusual plants of Mt. Kenya, adapted to the harsh equatorial-alpine climate where day is summer & night is winter. Woodlands of giant *Senecio* with 6-foot-tall *Lobelia* in the understory contrast sharply with our regional concepts of these genera. Don't miss this show!

26 March, Mon. Meeting, 7:30 p.m., Cordley Hall. Note the change in week for this month. Julie Kierstead of the Berry Botanic Garden in Portland will tell us about THE OREGON RARE & ENDANGERED SEED BANK.

Emerald

6 Feb., Mon. Meeting, 7:15 p.m., Red Cross Building, 150 E 18th, Eugene. MYSTERIES OF THE MONOTROPOIDEAE by Dan Luoma.

5 Mar., Mon. Meeting, 7:15 p.m.; Red Cross Bldg., Eugene. A discussion of 1984 FIELD SEASON ACTIVITIES of the Emerald Chapter R/E COMMITTEE, with Charlene Simpson & Dave Wagner.

2 Apr., Mon. Meeting, 7:15 p.m.; Red Cross Bldg., Eugene. THE OREGON RARE & ENDANGERED SEED BANK by Julie Kierstead of the Berry Botanic Garden in Portland.

High Desert

--- No meeting for February.

Mid-Columbia

1 Feb., Wed. Meeting, 7:30 p.m., Mosier School.

Portland

2 Feb., Thurs. PELICAN IN THE DESERT by Marie Gill & Geoff Pampush of the Nature Conservancy, & John Allen of Portland State University ; 7:30 p.m. at Miller Hall, Western Forestry Center.

4 Feb., Sat. Workshop, 10:00 a.m., First United Methodist Church, 1838 SW Jefferson, Portland. UP & DOWN THE FAMILY TREE with Julie Kierstead. Bring hand lens, notebook, & your credulity.

11 Feb., Sat. Workshop, 10:00 a.m., First United Methodist Church. COMPOSITES, with Julie Kierstead (Anne Kowalishen has been suddenly called away to Baja California). Bring hand lens & notebook, & samples if you like.

14 Feb., Tues. Meeting, 7:00 p.m., First United Methodist Church. Roger Yerke will show slides of his trip to BORNEO & up Mt. Kanobalu, highest peak in SE Asia. Join us for an entertaining evening of tropical rain forests, rhododendrons, orchids, & more (perhaps an orangutan or two).

19 Feb., Sun. FIRST ANNUAL POTLUCK, 1:30 p.m., Leach Garden, 6704 SE 122nd. Bring potluck dish, table service, family, friends; tours planned for after the meal. Call Esther Kennedy 287-3091 or Doris Ashby 245-2977 for more information. Beverages will be provided.

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25 Feb., Sat.	Workshop, 10:00 a.m., First United Methodist Church. MUSTARDS (the family CRUCIFERAE/ BRASSICACEAE) with Jean Siddall. Bring hand lens & notebook, & Hitchcock if you have it.
29 Feb., Wed.	URBAN WILDLIFE & YOU: Annual meeting of E Multnomah Soil & Water Conservation District, 7:00 p.m., main auditorium of BPA Bldg., 1002 NE Holladay St., Portland.
3 Mar., Sat.	Workshop, 10:00 a.m., First United Methodist Church. MOSSES OF THE COLUMBIA RIVER GORGE with Faith Mackaness. Bring hand lens & notebook.

Siskiyou

9 Feb., Thurs.	Meeting, 7:30 p.m., Rm. 171, Science Bldg., SOSC. PHOTOGRAPHY OF WILDFLOWERS with Ken Barron. Some helpful techniques for the beginner & advanced wildflower photographer will be presented. through slide examples & demonstrations. Topics include: use of different kinds of cameras & lenses, lighting, photography for art vs. identification. Lots of time for questions & discussion. The Siskiyou Chapter will elect new officers in March. If you are interested or have a nomination, please come to the Feb. meeting or contact the nominating committee through Wayne Rolle, 482-0093.
8 Mar., Thurs.	Meeting, 7:30 p.m., Rm. 171, Science Bldg., SOSC. ALASKAN WILDFLOWERS by Paul Alaback. Election of new officers also.

Willamette Valley

20 Feb., Mon.	Meeting, 7:30 p.m., Carrier Room, First United Methodist Church, corner of Church & State Sts., Salem. A MINI-PROGRAM SPECIAL--A BIOLOGICAL POTPOURRI--A SEMI-WORKSHOP ON SOME LOCAL BOTANISTS' HOBBIES & TRAVELS.

Portland Chapter

FIRST ANNUAL POTLUCK SOCIAL

Sunday, 19 February 1984

Leach Garden, 6704 SE 122nd St.
(.2 mile S of Foster on 122nd--
parking on S side of Johnson Cr.)

Help us start a new tradition - share a meal & an afternoon with your fellow native plants lovers with no guest speaker or hike for distraction. This time the subject is us!
Bring your best potluck dish plus table service. Beverages will be provided. Families & friends are welcome - the Leach House has plenty of room. Special tours of the Leach Garden are planned to follow the potluck.
Phone Doris Ashby (245-2977) or Esther Kennedy (287-3091) by Friday 17 Feb., and tell them what kind of food you will bring and how many people will come with you.

MARK YOUR CALENDAR !!

URBAN WILDLIFE THEME OF PORTLAND MEETING

The East Multnomah Soil & Water Conservation District's Annual Meeting will be held Wed., Feb. 29, at 7 p.m. in the main auditorium of the Bonneville Power Administration Bldg., 1002 NE Holladay St. (near Lloyd Center). Theme of the meeting is "Urban Wildlife & You". Those attending will learn how to attract birds and wildlife to their own backyards, and can take home a free birdhouse & an autumn olive plant, as well as booklets on creating wildlife habitat in an urban setting. Portland Audubon Society and the Oregon Dept. of Fish & Wildlife will be among those helping with the presentation.

THERE'S STILL TIME FOR WILDERNESS LETTERS

It's still not too late to let Senator Hatfield & other members of the Oregon delegation know of your support for the Oregon Forest Wilderness bill, according to Tom Imeson, Hatfield's aide. Portland chapter NPSO members Jeanne Huffstutter, Ruth Hansen, & George Jeffcott met with Imeson on January 18th, after a briefing by Nancy Peterson of the Oregon Natural Resources Council, to express their support for the bill and to ask that Table Rock & Badger Creek in particular be protected by the legislation.
During the week of Feb. 21st or soon after, Sen. Hatfield will make his recommendations on the bill to the Senate Energy & Natural Resources Committee; GET YOUR LETTER TO HIM BEFORE THIS DATE! Send a copy of your letter to Sen. Packwood, and one to your Congressional Representative.

IMPORTANT DESERT WILDERNESS MEETINGS

Feb. 4-5	Central Oregon Community College, Bend; Pioneer Hall Rm. 232, 9 a.m. For individuals who are working on wilderness proposals, have adopted a Wilderness Study Area, or are interested in working on areas.
March 29	Willamette Univ., Salem (tentative). BLM planning workshop, conducted by The Wilderness Society.
March 31	Bend (tentative). BLM planning workshop, conducted by The Wilderness Society.
May 19-20	Malheur Field Station; Desert Conference VI.

For details, see Don Tryon's letter in this issue.

President's letter:

Sitka alder

Next season's seed-producing catkins, coming out of their buds

Pollen-producing catkins

Old conelike cotkins

Red alder

Dear Fellow NPSOers,

I have very good news from Lane County. The list of 27 R&E plants which I submitted to county planners has been accepted!

As I mentioned in my December letter to you, I was invited by Lane County Commisioners Jerry Rust and Peter DeFazio to give my "input with respect to vegetative issues as they relate to Statewide Planning Goal 5." The Lane County Comprehensive Plan, of which this will be a part, is due to be presented to the LCDC early this year.

Charlene Simpson, Emerald Chapter R&E Chair, helped me draw up a list of 27 species which we believe deserve county protection (see below), and I learned just this afternoon that the Commisioners are prepared to accept the list. I know that all NPSO members realize that this list would have carried very little weight had it not been for the years of research and careful documentation carried out by the Oregon R&E Task Force. (Twenty-one of the 27 species are on the Oregon Natural Heritage Data Base list; the others need research to establish their status in Lane County.)

I should also mention that in addition to presenting our annotated list of Lane County R&E species, I closed my letter to the Commissioners as follows: "The NPSO stands ready at any time to work with County planners to protect Lane County's flora. Also our botanists are ready and eager to do any field checking and/or research needed to keep this list up to date." I believe this attitude has paid off as you will see if you read on.

Not only has our list been accepted but Lane County environmentalists were delighted when our suggestion that the County establish a committee of naturalists to give advice on matters of rare plant and animal protection was also accepted. I quote from a County staff report: (As a result of the concerns expressed at Goal 5 hearings)..."Flora and Fauna Policy # 14 was adopted in December, 1983 to be part of the final General Plan Policies document."

The Staff Report continues, "A group known as the Lane County Flora & Fauna Committee is to be established and given permanent status by the Board of County Commissioners. The Committee shall represent a wide array of environmental interests and the interests of property owners. Its tasks shall include: evaluation of LCDC Goal 5 concerns and resources, development of information, research and provision of resource site data to the County, and response to work in progress.

"Specific items could include: Refinement of lists of rare and/or endangered plant and animal species... Interim and permanent protection measures should also be developed.

"The work of such a group could be an extremely valuable asset to the County's planning program, since the resources of the group far exceed those available to the County staff. Committee members have, in the past, recognized limited staff resources and have expressed willingness to actually roll up their sleeves and provide a finished product to the County." (End of quote from county staff report.)

I think readers can appreciate why I feel good just now! Other counties in Oregon will be presenting county plans to the LCDC in the near future. I hope other members of our society will have the opportunity to submit testimony about plants needing protection in their part of Oregon.

Twenty-seven species of rare vascular plants accepted by Lane County, January, 1984: Aster curtus, A. vialis, Darlingtonia californica, Draba aureola, Erigeron cascadensis, E. decumbens var. decumbens, Eriogonum umbellatum var. hausknechtii, Frasera umpquaensis, Gentiana newberryi, Howellia aquatilis, Lathyrus holochlorus, Lomatium bradshawii, Montia diffusa, Microcala quadrangularis, Microseris bigelovi, Ophioglossum vulgatum, Pellaea andromedaefolia, Phacelia verna, Pityopus californica, Pleuricospora fimbriolata, Romanzoffia thompsonii, Sagittaria latifolia, Scoliopus hallii, Sidalcea campestris, S. hendersonii, S. nelsoniana, Smelowskia ovalis.

Flowers Forever,

Rhoda Love, President

GIVE & USE NPSO NOTECARDS

Ivory-colored notecards, each graced with a drawing of one of Oregon's rare wildflowers, are available through each chapter or by mail from Charlene Holzwarth. Each package of eight cards, with matching envelopes, costs only $2.50 when purchased from your chapter; 50¢ from each sale goes to the chapter treasury, and the rest goes to NPSO's Rare & Endangered fund. To order by mail, send $3.00 per pack of eight different designs (the extra 50¢ is for postage & handling) to:

Charlene Holzwarth
2524 NE 34th
Portland, OR 97212
(503) 284-3444

Buy two! Write to your Senators & Representatives about Gorge legislation, or the Oregon Forest Wilderness bill, or desert wilderness, or the Endangered Species Act. Write the rest of your holiday thank-yous (this alone will take more than one package).

ANNUAL MEETING UPDATE

The NPSO Annual Meeting will be held in Sunriver, near Bend, on June 1, 2, and 3. A schedule of events, registration form, and field trip descriptions will appear in the March Bulletin. There will also be information on how to obtain lodging, which will be handled separately from the meeting registration. Some Sunriver condominiums have been set aside for our use, with reservations to be made at least 30 days prior to the meeting. Other types of housing will also be available.

The three field trips on Saturday, June 2, will be:

1. The Squaw Creek/Metolius area near Sisters
2. The Lawrence Grassland near Shaniko
3. The Black Hills near Christmas Valley (not the Black Hills area far to the south of Christmas Valley shown on some state of Oregon maps.)

There will be a banquet, business meeting and program on Saturday evening. Other special events will be scheduled on Friday before the main meeting and on Sunday following.

Welcome, new members

BLUE MOUNTAIN CHAPTER
Sandra M. Kennedy

EMERALD CHAPTER
Jay R. Marston
Stephanie Schulz

HIGH DESERT CHAPTER
Patricia Meehan
Mr. & Mrs. Donald M. Kerr

PORTLAND CHAPTER
Del Blackburn
Golda E. Kirkpatrick
Joseph W. Miller

SISKIYOU CHAPTER
Michael Anderson
Lee Cockrell
Marty Loquvan
Jim & Aneta McIntyre

Bigleaf maple in rain forest (Drawing by Ramona P. Hammerly, from Northwest Trees by Stephen F. Arno & Ramona P. Hammerly, The Mountaineers Books, Seattle)

Books reviewed

Northwest Trees by Stephen Arno & Ramona P. Hammerly, 1977. Published by the Mountaineers, Seattle. $6.95 paper, $30.00 hardcover.

Although this book has been in print for almost seven years, it has not garnered as wide a following as it deserves. The combination of an engaging text and elegant drawings makes Northwest Trees appropriate for any Oregonian's library. I was a committed dendrophobe when I got my copy as a gift in 1978, so I flipped through it, admired the drawings, and left it at that. But I have since read it straight through several times, and I refer to it often; it's good for clearing up dinner table questions.
Each major species has its own chapter (the eight willows which attain tree size are treated together, as are the alders and birches), which gives general habit and habitat information, a detailed range description, and an account of its ecological characteristics, commercial and historical uses, pests and diseases, and use by wildlife. The text, by Stephen F. Arno, is written in narrative style without pedantry; for instance:

> Sitka spruce often becomes a massive tree limbed nearly to the ground with branches 8 inches thick and 30 feet long. These great, spreading boughs often have secondary branches that hang down 2 or 3 feet in a weeping appearance, Open-grown spruce with their huge, limby crowns, called "wolf trees," make good shelter from the rain (provided one has enough time for waiting out the rain; a bedroll, food, and several good books may come in handy).

Ramona Hammerly's pen and ink drawings are rich in texture and detail, and true. She draws her subjects with affection but doesn't trivialize them with sweetness. Each chapter is accompanied by at least one major portrait of the species in its normal surroundings, and there are additional smaller drawings of diagnostic features. But the real delights are the little vignettes: a squirrel eating a maple seed, a lichen-covered branch, a group of yellow-bells (Fritillaria pudica).
On the minus side, the index lists only common names, although scientific names are used in chapter headings and in the text. This is an unnecessary inconvenience. If the book has any other flaw, it is one shared with Hitchcock and Cronquist's Flora; namely, it does not cover the southern half of the state. While this may be justified by the difference in floristic composition, it means leaving out such interesting trees as Port Orford cedar (mentioned briefly in the Alaska Cedar chapter) and the little-known SW Oregon endemic, Matthews cypress (Cupressus bakeri ssp. matthewsii).
Nevertheless, whether you are the sort who revels in living among the world's most magnificent conifer forests or are someone who thinks trees are an inappropriate dinner subject, I recommend this book to you. Even if you don't take to it at first, it will win you over.

J.R. Kierstead
Portland Chapter

Jean Davis Award

NPSO will award a scholarship to a worthy student in an Oregon college, with his or her major study in plant systematics or plant ecology. The scholarship is in the amount of $1,000, and is to be used toward the student's tuition within the following academic year. Deadline for applications is April 1, 1984; the award will be made by May 1, 1984.
Donations to the scholarship fund are tax deductible and are welcome at any time. All interest earned from the donations is apportioned out to as many scholarships as possible in the spring of each year, at $1,000 each.
All communication regarding this fund should be addressed to Mary Falconer, Committee chairman, 1920 Engel Ave. NW, Salem, OR 97304.

* * Rules for Scholarship Awards * *

1) Scholarships are available to students in Oregon colleges, planning their major study in Plant systematics or ecology.
2) Scholarships are awarded in the amount of $1,000 to worthy students who will complete at least 2 years of satisfactory college work by July 1 of the year of receipt of application, & are full time students. Graduate students may be eligible if they meet all qualifications except that of "full time student".
3) Awards are made in the following manner:
   a) a certificate presented to the recipient
   b) a check in the amount of the award, submitted to the school of choice, as set forth in rule 1, to be used toward tuition within the following academic year
4) If an award recipient fails to enroll, changes his or her major, or leaves the school before completing the period for which the award was granted, the full amount or unused part of the money shall be returned to the Jean Davis Memorial Scholarship Fund.
5) Applicants are required to submit:
   a) in their own handwriting, a statement of academic & career intent
   b) two letters of reference from persons able to judge to student's ability to successfully complete study in the area of plant systematics or plant ecology
6) All applications together with items listed in rule 5 must be received by the Chairman of the Jean Davis Memorial Fund Committee no later than April 1. The award will be made by May 1.
7) Scholarships are not granted to members or relatives of any person currently serving on the Scholarship Committee.

'84 Hopefuls

Meet the nominees! The 1984 slate is a good mix of amateur and professional botanists from around the state. Ballots will be included in the March Bulletin.
Nominees for NPSO state offices:

President

Franklin (Herm) Fitz: Herm teaches biology & curates the Museum of Natural History at McKenzie River High School. He has a Ph.D. in ecology from Utah State, has been an NPSO member for 7 years, & writes Plant Family Profiles for the *Bulletin*. He is presently working on *A Flora of the McKenzie River, Oregon*.

Vice President

Michael D. Fahey: Mike is past program chairman for the Portland chapter, and has led a field trip & presented a chapter program for them. He has an extensive collection of wildflower slides & has provided slide shows to several local groups. He earned a Ph.D. in 1957 & is currently a Research Associate with Crown Zellerbach Corp.

Secretary

Jeanne Huffstutter: Jeanne is the current president of NPSO's Portland chapter, & has been a member for 5 years; she served on the Endangered Plant committee for several years. She is a professional physical therapist & amateur botanist who does not admit to any botanizing bias--she likes all plants in all parts of the state.

Treasurer

Marjorie Ettinger: Marjorie has been involved with NPSO since the High Desert chapter was formed several years ago. She still likes to spend time in the COCC herbarium, & identify the flowers her husband Dick photographs. NPSO has been just a hobby, she says, but she enjoys the contacts she has made.

Directors

Floyd Hendron: Floyd is a 32-year-old college graduate currently working for a computer company in Beaverton. He belongs to many natural history organizations, including Audubon Society & The Nature Conservancy, & is vice president of the Geological Society of the Oregon Country.

Susan R. Kephart: Susan is Assistant Professor of Biology at Willamette University, and teaches a variety of biology & botany classes. She earned a Ph.D. in plant science from Indiana Univ. in 1979, and has recently published her research on the reproductive biology of *Silene douglasii* var. *oraria*, the endangered Cascade Head catchfly.

Mentzelia laevicaulis
Blazing-star
By Susan Lindstedt, Malheur Field Station

Gordon Larum: Gordon was the first vice president of the Siskiyou chapter, & has also served as its president. He is a lifelong amateur botanist with a special interest in fungi, & has worked as naturalist for Lithia Park in Ashland. His concern for making the public aware of the need for conserving our flora & fauna has made him an active NPSO member.

Barbara Robinson: Barbara is an amateur botanist & photographer, & a charter member of the High Desert chapter, for which she served as 2nd vice president & field trip chairman 1980-81. She compiled the chapter's plant inventory of The Nature Conservancy's Metolius R. Preserve. She grew up on a hillside ranch in SW Oregon, & took college botany at age 45--says she wanted to properly identify the plants she'd photographed & stepped over all her life.

Naoma Neyerlin: Naoma is a retired educator who works part-time for Umpqua Nat. Forest, managing slide & photo collections & displays. After growing up in a "plant family", she maintained her long-abiding passions for camping, hiking, dancing, wildflower photography, & plant study. She helps collect specimens for the Glide Wildflower Show, & maintains several plant lists for areas of S Oregon.

Veva Stansell: Veva lives in Gold Beach, & works with the local U.S. Forest Service district as a volunteer for plant identification, which she is quite good at. She has a particular interest in plants of the Siskiyou Mtns., especially those which are rare, threatened, & endangered; and her diligent field work on these plants has helped resolve many questions about their distribution & ecological preferences.

Rhoda Love: Rhoda is currently state president of NPSO, & has been an active member for many years in Eugene. She earned a Ph.D. from the Univ. of Oregon, & has taught botany & plant taxonomy at college level for several years. She is an ardent & outspoken supporter of conservation issues, wilderness protection, & rare plant legislation; and she is actively involved with the Mt. Pisgah Arboretum.

R/E News

We continue this month with our series on obscure Oregon R/E species whose descriptions are not readily available in floras of the Northwest.

* * *

AMSINCKIA CARINATA Nels. & Macbr., described some time ago but overlooked in the floras, is still known only from the type collection made by Leiberg in "rocky soil, Malheur Valley, near Harper Ranch, alt. 1100 ft., Jone 10, 1896." Pat Packard searched for this species in 1976 and 1977 without finding it. More search is needed, and with a description to go by, we hope it will be found again--it may now be extinct.

The following description is from Nelson and Macbride. 1916. Western Plants. *Bot. Gazette* 62: 145-146.

> *Amsinckia carinata* n. sp. - Foliage, pubescence, calyx, corolla, etc. of *A. vernicosa* H. & A.*; nutlets lustrous, smooth, very dark gray with a few darker markings, not less than 5 mm long, not at all triquetrous, the angles obtuse (almost rounded), the back somewhat concave but distinctly carinate by reason of a raised but rounded ridge; ventral surface sharply keeled, the acute edge, including the linear scar, ending abruptly near the base where there are two distinct depressions, giving the impression of an open bifurcation.
>
> In contrast, the nutlets of *A. vernicosa* are gray, smooth, shining, 4-6 mm long, plane on back and lateral surfaces, with lateral angles sharp and carinate; scar very narrow.

*For descriptions of *A. vernicosa* see Munz and Keck, 1973, *A California Flora & Supplement*, p. 587-588; or Abrams, 1951, *Illustrated Flora of the Pacific States*, vol. III p. 606.

*

Other species on the R/E list which Leiberg collected in May-June 1896, on rocky ground "near Harper", which should be looked for as well and may help find *Amsinckia carinata*, include:

- *Allium lemmonii*, last seen in the area by Cal Burt in 1977
- *Cryptantha humilis*, no reports or collections known from the Harper area since 1896--added to the Review List 3/82

On diatomite, he found: *Chaenactis cusickii*, *Cryptantha propria*, & *Eriogonum ochrocephalum calcareum*; on sandy ground: *Malacothrix glabrata* (added to the Review List 3/82), & *Nemacladus rigidus*, also last seen in the Harper area in 1896.

*

A. *Hackelia patens*. B. Close-up of *H. patens* fornix. C. Close-up of *Hackelia ciliata* fornix, similar to *Hackelia cronquistii*. Drawings by J.R. Janish.

HACKELIA CRONQUISTII J.L. Gentry is listed under this name in Hitchcock & Cronquist's 1-volume *Flora of the Pacific Northwest*, where the name *Hackelia patens* var. *semiglabra* is given as a synonym of it. In the 5-volume *Vascular Plants of the Pacific Northwest* by Hitchcock et al., var. *semiglabra* is described in the addenda, vol. I p. 860:

> Typical *H. patens* has the fornices of the corolla distinctly villous-puberulent and the stems evidently strigose throughout, retrorsely so below, antrorsely so above. The var. *semiglabra* Cronq. . . differs in having the fornices merely papillate or papillate-puberulent and the stems glabrous below the middle and only sparsely antrorse-strigose above. It occurs in a limited area between Vale and Harper, Malheur Co., Oreg., at the southern edge of our range, well isolated from the range of var. *patens*.

This species is another which needs field-checking between Vale and Harper. It is presently known to be extant in only one population on Vines Hill, found by Pat Packard in 1978. Pat suggests that sandy E-facing slopes with sagebrush along Bully Creek, Little Valley and the area S of Vines Hill also need to be searched.

* * *

GORGE BILLS COMPARED

Columbia River Gorge National Scenic Area Act of 1983 (S. 627 - "The Packwood Bill")	*Columbia River Gorge Act of 1983 (Amendment 2125 - "The Governors' Bill")*
SCENIC AREA	
Establishes the "Columbia River Gorge Scenic Area" for the purpose of protecting all the resources of the Gorge--scenic, natural, cultural, and economic. The Area extends along the Gorge from the Sandy R. to Maryhill Museum; ca. 310,000 acres, or 480 $mi.^2$	Maintains area boundaries of present Gorge Commission; 5-10% smaller than S. 627 Area.
EXEMPTIONS FROM SCENIC AREA LEGISLATION	
All incorporated cities in the Gorge.	Cities not exempt. Exemptions: ongoing development of Bonneville Dam locks (including dumping of spoils); land management or development which commences before enactment; all commercial forest activities (e.g. logging) on Forest land. This last exemption applies to ca. 20% of all Gorge lands.
ADMINISTRATION OF SCENIC AREA	
The Area will be administered by the Secretary of Agriculture, through the U.S. Forest Service, with the advice & assistance of a 14-member Columbia River Gorge Scenic Area Regional Commission. Commission membership as follows: 1 member from each of the 6 counties in the Gorge; 2 each from Oregon & Washington, appointed by the governors; 3 appointed by the Secretary of Agriculture; & the Chief of the USFS or his designee as a non-voting member.	Administered by a 14-member commission consisting of 6 elected officials from Gorge counties; 4 members-at-large from the Gorge; 4 other members-at-large from Oregon & Washington. All members appointed by the President from a slate prepared by the Governors. U.S. Forest Service, Bonneville Power Administration, Army Corps of Engineers & other appropriate agencies serve as non-voting advisors.
MANAGEMENT PLAN	
An interdisciplinary team chosen by the Chief of the USFS will develop a management plan for the Scenic Area. When completed, the plan will be submitted to the Regional Commission which will have 6 months to review it & hold public hearings, at the end of which it will vote on the plan. If they approve it, the plan will go into effect. If they vote against it, the Sec. of Agriculture has 90 days to consider their objections, & may modify the plan to meet them but is not required to do so. After 90 days the plan is resubmitted to the Commission, which has another 90 days to consider it, at the end of which the Sec. of Agriculture can adopt the management plan with or without the Commission's approval.	The 14-member commission prepares, adopts, implements & enforces a management plan. Agencies & local governments submit plans to the commission for approval & are responsible for enforcing their plans.
LAND ACQUISITION	
The Secretary is authorized to acquire land through donation, purchase, exchange, or bequest. He must seek the advice of the Regional Commission on all acquisitions. Condemnation can proceed only when all reasonable efforts to acquire land by negotiation have failed. Other land-protecting options such as scenic easements or land exchanges must be tried first.	The commission can acquire land in the same ways. Each condemnation must be approved separately, by a 2/3 majority, at a public meeting.
Exemptions: Only lands classified as critical for maintaining the uniqueness of the Gorge can be condemned. Critical lands are identified in the map which accompanies the Gorge bill. Critical lands which were used for single-family residences, farming, or grazing before July 1, 1981, cannot be condemned, provided the use of the land is not changed.	Only lands classified as critical can be condemned. Critical lands are identified by the commission (no map included with the bill). Exemption is not limited to existing residences--houses constructed long after enactment are also exempt.

INTERIM MANAGEMENT

Within 6 months after the enactment of the Act, the Secretary of Agriculture will identify interim critical areas & adopt interim standards & guidelines governing all land use activity within the Area with the advice of the Regional Commission. These will be in effect until the management plan for the Area is adopted. Maximum interim period: 2½-3 years.

During the interim period, land management & development cannot be undertaken without the commission's approval. If such approval is not given within 60 days by the commission (which meets only every 90 days), the activity is automatically approved. Maximum interim period: 3 years 2 months unless the President disapproves of the Governors' slate, in which case the interim is open-ended.

FOREST WILDERNESS NEEDS YOUR HELP

One of the most important pieces of legislation for the permanent protection of some of Oregon's outstanding wildlands, including critical habitats for native flora and fauna, key watersheds, and valuable fishing, boating, hiking, birding, botanizing, and other recreational resources, is soon to be considered by the Senate. It is the Oregon forest Wilderness bill, the House version (H.R. 1149) having passed last spring.

Through no other tool, do we have the opportunity to protect so much of the biological treasure that is the state's native forest ecosystem. With Wilderness preservation, we have the chance to maintain intact watersheds, genetic reserves, and research baselines.

Wilderness also offers the chance of protecting the last stands of old growth forest of significant size. The dynamic old growth system is critical for the survival of about 30 species of wildlife, and is rapidly disappearing.

Senator Mark Hatfield is expected to introduce his version of the Wilderness bill early in February. It is critical that NPSO members voice their support as soon as possible. Below are some of the specific areas that are worthy of note for their valuable native plant communities, and for their urgent need of your support.

MIDDLE SANTIAM: The best example of old growth Douglas-fir left in Oregon.

OLD CASCADES: Echo Mtn. with 17 species of conifer, as well as several disjunct species; and Iron Mtn, the Pyramids, Browder Ridge, Jumpoff Joe, which all boast impressive wildflower displays.

TABLE ROCK: A phenomenal diversity of native plantlife--as many as 160 species may be viewed at one time; a forest island in a vast expanse of clearcut private lands.

DRIFT CREEK: The best example of old growth Douglas-fir left in the Coast Range, the region of Oregon most heavily impacted by logging.

RED BUTTES: Diverse and fascinating plantlife of the Siskiyou Mtns.--Sadler's oak, huckleberry oak, weeping spruce, and the extraordinarily beautiful Lewisia cotyledon.

DEADHORSE AND COLEMAN RIMS: Valuable stands of old growth ponderosa pine; the only remaining habitat for old growth species left on the entire Fremont National Forest.

BADGER CREEK: The only opportunity to include a unique pine-Oregon oak community in the Wilderness system.

CUMMINS AND ROCK CREEKS: Giant old growth Sitka spruce; the endangered Oregon coastal silverspot butterfly.

WHAT TO DO

1) Please write a short letter to Senator Hatfield, with copies to Senator Packwood and Congressmen Jim Weaver, Les AuCoin, and Ron Wyden, in support of H.R. 1149 and the addition to that bill of Drift Creek, Deadhorse Rim, and the 4 units of the Old Cascades that were not included--Browder Ridge, Moose Creek, Pyramid, and Jumpoff Joe.

2) Mention specific areas within H.R. 1149 that you believe deserve special attention.

Senators: Senate Office Bldg.
Washington D.C. 20510

Representatives: House Office Bldg.
Washington D.C. 20515

Your help is absolutely critical. Thank you!

IMPORTANT ADDRESSES

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.

Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.

Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.

Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.

Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.

Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.

Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.

Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.

Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.

William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.

Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.

Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

OREGON DESERT WILDERNESS

In 1976 Congress passed the Federal Lands Policy and Management Act (FLPMA), which elevated the Bureau of Land Management (BLM) from a land-giveaway service that catered to livestock grazing interests, to a full-fledged multiple use agency.

To further complicate the task of the agency, Congress required BLM to conduct a full wilderness review of all its lands by 1991. The task was, and is, staggering. In Oregon alone, the Bureau had to look at 15.7 million acres.

Had the Bureau used the same criteria for inclusion in the National Wilderness System as did the Forest Service in that agency's many roadless area reviews, the BLM would find that it has approximately seven million acres of qualifying lands.

That just wouldn't do. The typical BLM manager couldn't fathom that such a great percentage of the Bureau's holdings met the minimum criteria for inclusion in the Wilderness System: roadless and undeveloped lands with a substantially natural character.

To pare down the amount of areas that had to be considered, the agency required that an area not only be unroaded and natural, but also have "outstanding" opportunities for solitude or primitive recreation. As a result of this recreation bias in their inventory process, the BLM felt that only 2.6 million acres of its holdings were outstanding enough to be Wilderness Study Areas (WSA's).

What criteria did the BLM use for making its determination? Essentially, an area had to be so "outstanding" as to outweigh the potential value of any possible conflicting use, regardless of whether that conflicting use was economically justified.

The next step in the BLM Wilderness review is the reporting process. The law requires the BLM to report its findings to Congress, who has reserved for itself the final say on what shall and shall not be designated as Wilderness Areas.

Fortunately, the BLM must maintain the wilderness characteristics of the WSA's until Congress specifically acts on their recommendations. Unlike the Forest Service, they may not develop the areas while Congress is considering them for possible inclusion in the National Wilderness System.

(An excerpt from Wild Oregon, Fall 1983 issue, published by the Oregon Natural Resources Council, 1161 Lincoln, Eugene

Drawing by Ramona P. Hammerly, from Northwest Trees, by Stephen F. Arno & Ramona P. Hammerly, The Mountaineers Books, Seattle.

Trout Creek Mountains

In the cool wind of spring, the small, magenta monkey-faced flowers grinned out of the harsh basaltic gravel soil. *Mimulus nanus* looked right at home at 7,000 feet in the Trout Creek Mountains.

On Oregon's "Official Highway Map" you can find the Trout Creek Mountains by looking at the space northwest of McDermitt and northeast of Denio. In small lettering, usually at the west end of the range, the words "Trout Creek Mountains" can be found. A series of streams running northwest to nowhere and east to Nevada's Quinn River are telltale signs that the high country is larger than the small words imply - in all, nearly a quarter of a million acres of high desert wilderness.

The Trout Creeks look and feel different. The normal fault patterm of great basin ranges, with their high-angle relief, is subdued by two collapsed calderas, the Whitehorse on the northwest and the McDermitt on the southeast. So the Trout Creeks look more like a plateau that tilts from 8,000 feet in elevation in the south to about 4,000 feet in the north. That geologic fact makes the Trout Creek Mountains easy hiking.

It has made it easy to penetrate the area with livestock access roads, too. And so the Trout Creek Mountain wilderness is disaggregated into six separate Wilderness Study Areas (WSA's) - Mahogany Ridge, Disaster Peak, Willow Creek, Fifteen Mile Creek, Twelve Mile Creek, and Oregon Canyon.

The Trout Creek Mountains are plagued by more than their share of administrative and ownership demarcations. Disaster Peak is in Nevada. Mahogany Ridge is being planned by the Burns BLM district, the other units by the Lakeview district. There are also 3,000 acres of private land.

Like the rest of the great basin, the Trout Creeks have been "up for grabs" for over a century. People patented the land they wanted. All of the land is grazed by livestock. In 1869, flamboyant John Devine arrived from Sacramento with 3,000 head of cattle. He claimed the abandoned lands of Fort C.F. Smith. His beautiful Whitehorse ranch stands as testimony to a time rich in history, poor in range management practices.

To the south of the Trout Creeks, the Bretz and Opalite mines, where 1200 tons of mercury have been extracted since 1926, illustrate, with scars on the land, the other major use of the public domain. In recent years packmarks - the cancer of uranium mining - have begun to dot the landscape.

If you look down as you walk, you will find remains of people who walked more softly on the earth. Lithic scatters are common, perhaps the remains of Northern Paiute Indians who lived in the Great Basin for several thousand years. They shared the mountains with pronghorn and mule deer, with the awesome canyons carved by such creeks as Oregon Canyon and Whitehorse; with the beaver and unique Whitehorse cutthroat which live in those creeks.

With the exception of cattle and the accouterments that accompany livestock - roads, fences, reservoirs, spring developments, ticks, flies, and stink - the visitor will find much of the Trout Creek Mountains as they have been since prehistoric times. Range condition is generally good, with cheat not the dominant grass. A variety of forbs blossom throughout the spring and summer.

Some relatively rare plants can be found - nodding melic *(Melica stricta)*, four-winged milkvetch *(Astragalus tetrapterus)*, the lovely Bruneau mariposa lily *(Calochortus bruneaunis)*, and other. Stands of mountain mahogany *(Cercocarpus ledifolius)* of different densities provide cover for the old mule deer bucks, yellow-bellied Sapsuckers, and House Wrens. Low sage *(Artemisia arbuscula)* is the most common shrub, but Wyoming big sage *(A. tridentata)* is found on deeper soils.

In the cool, moist, streamside zones, especially at the heads of drainages, aspens provide shade for the streams and food for the beaver. And the beaver fashion dams that provide reservoirs for trout when water flows to a slow trickle, in the fall of dry years.

With the closure of roads and the combination of areas, the entire Trout Creek range could be set aside to provide one of the Great Basin's finest mountain wilderness areas.

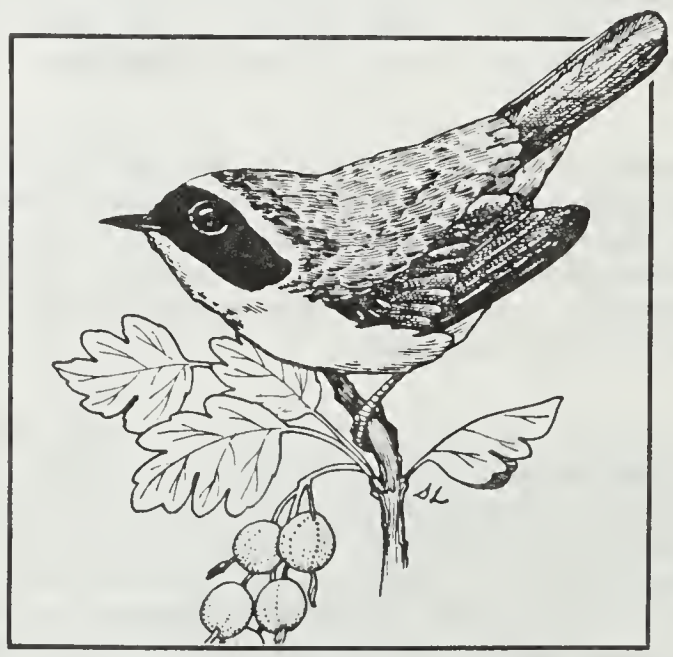
Cercocarpus ledifolius

Some other areas in Oregon's Basin and Range region which ONRC believes are suitable for Wilderness include:

2) DIABLO MOUNTAIN (113,120 ac.) Includes a portion of Summer Lake and adjacent sand dunes as well as a series of uplifted blocks and rims; Diablo Rim is the largest, dropping 1800 feet to the east boundary of the area and offering spectacular views; vegetative transition from salt desert shrub to sagebrush community.

3) ABERT RIM (22,240 ac.) A long, narrow area encompassing most of Abert Rim, the largest fault scarp in North America; Colvin Timbers, a remnant stand of Ponderosa Pine; several seeps, and springs; bunchgrasses in excellent condition along the rim where grazing is minimal; reintroduced bighorn sheep; several archaeological sites.

4) FISH CREEK RIM (18,520 ac.) Dominated by the east-facing Fish Creek Rim, which rises from 1500 to 2,000 feet above the Warner Valley; the remainder of the area is fairly flat terrain broken up by several small scarps and drainages; exceptional stands of mountain mahogany; a disjunct stand of white fir *(Abies concolor)*; crucial deer winter range; excellent potential for peregrine falcon reintroduction.
5) HART MOUNTAIN (74,480 ac.) Includes 5,360 ac. of BLM adjacent to the Hart Mountain National Wildlife Refuge. Home of bighorn sheep, pronghorn antelope, & other wildlife. Hart Mountain is a major landmark in the desert country. Contains ephemeral lakes and archaeological sites. Vegetation is sagebrush and juniper *(Juniperus occidentalis)*. Varied topography allows for outstanding solitude and recreation.
6) DEER CREEK (15,360 ac.) Contained entirely in Hart Mountain National Wildlife Refuge. Great opportunities to see antelope in large numbers; also habitat for mule deer & other other wildlife. Popular camping area.
7) GUANO CREEK (10,560 ac.) Elevated tablelands with Guano Creek forming a canyon that drops into a broad erosion basin with steep cliffs; two sink lakes with high quality native vegetation due to livestock exclusion; raptors & waterfowl; deer & antelope; numerous archaeological sites; diverse landscape.
8) WARNER LAKES (33,680 ac.) Contains Flagstaff, Upper & Lower Campbell Lakes which are ephemeral, but still important sildlife habitat; lands surrounding lakes consist of hummocks, dunes, & a maze of dry drainage channels between lakebeds. Also contains extensive alkali flat primarily vegetated with greasewood *(Sarcobatus vermiculatus)*. Contains outstanding recreation potential & opportunity for nature study during dry or wet years.
9) POKER JIM RIDGE (164,660 ac.) Includes 78,920 ac. of Hart Mountain National Wildlife Refuge. Unit dominated on west side by Poker Jim Ridge. The east is characterized by vast sage flats which rise in elevation to rolling terrain. Occasionally cut by deep canyons. Important wildlife habitat for bighorn sheep & pronghorn antelope. Poker Jim Ridge proper (15,500 ac.) is recommended by Administration for Wilderness designation. Outstanding feature is size, which affords both solitude & recreation.
10) OREJANA RIM (22,800 ac.) Upland flatlands bisected by the 400-foot deep Orejana Canyon and dropping off 500 feet on the western edge at Orejana Rim; considerable numbers of mule deer & pronghorn; golden eagle, prairie falcon, great horned owl; interesting formations of glassy lava & obsidian.
11) GUANO SLOUGH (262,360 ac.) Contains 125,440 ac. of Hart Mountain National Wildlife Refuge. Tremendously vast area of large ephemeral lakes, broad sage basins, deep canyons with vertical basalt walls & steep side canyons, low rolling hills & small broken rims; sandy soils & sloughs. Landmarks include Lone Grave Butte & Cox Butte. Excellent antelope & other wildlife habitat. If solitude is sought, this is the place to go. Archaeological sites are suspected.
12) THE POTHOLES (65,720 ac.) Considerable topographic diversity--sage flats, rolling hills, Sage Hen Canyon, rims, plateaus, numerous erosion features, 20 ephemeral lakebeds; spectacular scenery at northern end; exclusion of livestock in portions of Sage Hen Canyon & resulting pristine beauty; several cultural & archaeological sites.
13) HAWK (311,650 ac.) A broad basin bordered by rolling hills & flat-topped plateaus; scattered rimrock throughout the area; more than ten distinct vegetative communities; abundant wildflowers; wild horses; crucial antelope winter range; numerous archaeological sites; adjacent to an administratively endorsed wilderness in Nevada; highly concentrated raptor nesting; nationally endangered peregrine falcon.
14) PUEBLO MOUNTAINS (68,030 ac.) Impressive tilted fault block with average elevation of 7,300 ft.; Pueblo Mountain--8,634 ft.; high elevation basins & meadows; several intermittent streams; numerous rare plant species; bighorn sheep; crucial deer & antelope winter range; two sensitive fish species--Alvord chub & Whitehorse cutthroat trout, the latter a candidate for federal endangered status.
15) RED MOUNTAIN (14,720 ac.) Flat lowlands of Pueblo Slough, Red Mountain, & rolling foothills dissected by numerous intermittent streams; fossil beds; two plant species of concern; critical antelope & deer winter range; beautiful scenery.
16) STEENS MOUNTAIN (246,155 ac.) Multi-unit proposal stretching the entire length of the Steens; outstanding scenery; wild horses; sage grouse; bighorn sheep; critical deer winter range; significant raptor habitat; numerous rare plant species; Whitehorse trout; one of two known locations of pikas in the state; only habitat for water shrew in eastern Oregon.
17) ALVORD (248,900 ac.) Alvord Desert; numerous playas; steep ridges rising to flat-topped buttes; rolling hills dissected by intermittent streams; hotsprings; a diversity of vegetative belts; several rare plant species; unusual wildlife diversity; kit fox, bighorn sheep, pronghorn, unique reptiles, wild horses; antelope winter range; desert edges form a unique ecological zone.
18) SHEEPSHEAD MOUNTAINS (209,000 ac.) Rolling sagebrush hills cut by numerous steep draws & escarpments; several small buttes; one large flat-topped butte (Table Mountain); lava flow with scientific & educational values; wild horses; views of Steens Mt. & Alvord Desert; northernmost range of the kit fox; raptor habitat; numerous rare plants.
19) BOWDEN HILLS (59,900 ac.) High rolling hills cut by rimrock canyons, extensive communities of black sage *(Artemisia nova)*, lush bluebunch wheatgrass *(Agropyron spicatum)*, big sagebrush & Great Basin wild rye *(Elymus cinereus)* along the bottoms of drainages.



Common Yellowthroat on *Ribes*
Geothlypis trichas
By Susan Lindstedt, Malheur Field Station

We get letters:

November 18, 1983

Native Plant Society
Dr. Dave Wagner
Herbarium, U. of O.
Eugene, Oregon 97401

Dear Friend,

This is a matter of some urgency. The effort to obtain a National Scenic Area designation (Senate Bill 627, "The Packwood Bill"; also introduced in the House by Reps. Weaver and AuCoin as H.R. 1747 - ed.) for the Columbia River Gorge runs the risk of falling through the legislative cracks because of the following events:

1. Extremely weak legislation introduced at the request of the Governors of Oregon and Washington into Congress just prior to the Summer recess in August 1983. (Amendment No. 2125, "The Governor's Bill" - ed.)
2. The death of Senator Jackson in September 1983.
3. The involvement with the election of Senator Dan Evans Nov. 8, 1983.
4. The targeted adjournment of Congress toward the end of November for the Thanksgiving/Christmas recess.
5. The abundance of international incidents that leave our citizens numb with impact; i.e., KAL-007, Lebanon, Grenada, El Salvador, nuclear freeze.
6. The extremely short work year available to Congress in 1984.

We would urge you, your organization and your members to bring to the attention of our Senators and Representatives the need for timely action to assure protection of the Columbia River Gorge against the mounting pressures for its despoilment...

FOCG has been informed by many sources that if Senators Evans and Gorton agreed with Senators Packwood and Hatfield that S.627 was the bare minimum that was necessary in order to protect the Gorge, that passage of that legislation could occur early in 1984. Our information is that if there is any reluctance on the part of Senators Evans and Gorton to espouse this position its because we haven't had enough grass roots support to indicate to them that this is what the citizens of the State of Washington desire. That has been accomplished by the citizens of the State of Oregon. It is up to those of us who live in Washington to make certain that this message gets to our Senators and to our Representatives during the next 2 months that they are in recess.

We should urge our Senators and Representatives to support early passage of S.627/H.R.1747. Those individuals in our various organizations that have a personal relationship with the Senators and Representatives should make every effort to make a personal contact with them and urge their support and movement for this legislation. We would also ask that those who feel comfortable in so doing, write a letter to the Editor of their local newspaper or if they know the Editor, call and urge the Editor's support of this very important legislation.

Every day sees further degradation taking place with subdivisions being approved within the Gorge. Our best hope of getting legislation passed is between the Nov. 8 election and before Congress begins running for re-election in 1984. The importance of the citizen's lobbying cannot be overstated. If nothing else in Washington, D.C. works, you can be certain that the citizen's lobby does. Your help is urgently needed. If there's anything that the Friends of the Columbia Gorge can do to assist you in this regard, please do not hesitate to call upon us.

Thank you very much for your every consideration.

Cordially,

Nancy Russell, Co-Chair

Dave Cannard, Co-Chair

Friends of the Columbia Gorge

SAGE ASSOCIATION, INC.
Post Office Box 85
Powell Butte, Oregon 97753

for the Oregon desert

January 8, 1984

Dear Friend of the Desert,

1984 will be the year that the Bureau of Land Management completes their Wilderness Study of the 15.7 million acres that they administer in Oregon. The Bureau has never before studied Oregon lands for their Wilderness potential and may never study them for this purpose again.

Conservationists are planning three meetings between February and May to prepare for the upcoming crucial field season.

1) Feb. 4 and 5 at Bend. Central Oregon Community College, Pioneer Hall Room 232 at 9 a.m.

The meeting is specifically for individuals who are working on wilderness proposals, have adopted a Wilderness Study Area, or are interested in working on areas.

We will review a few wilderness proposals in various stages of development. Slides will be shown of study areas. Overall strategy will be discussed and people with areas of expertise will provide constructive ideas. Conservationists will be updated on desert preservation efforts by statewide leaders.

Some important decisions will be made at this meeting: First, tasks will be allocated to specific groups and individuals. Second, I have been

discussing the potential of a force of volunteers to formally monitor Interim Management Policy on Wilderness Study Areas with the BLM. The decision to pursue such a program or not will probably have to be made at this meeting. For further information on the meeting contact me at 503-447-3508.

If you are interested in working on areas, or you are working on areas and cannot come to the meeting please contact me and give me a brief description of what you have done or intend to do. There isn't any point in our sending someone out to take photos of a Wilderness Study Area if someone in the state already has 200 slides of the area. Please! Let us pool our resources and work together in a coordinated programmatic effort.

The meeting will last all day on Saturday and begin by nine on Sunday morning. We will try to wrap up by one on Sunday.

In March the Wilderness Society will conduct two BLM planning workshops in Oregon. Tentatively, the first workshop will be in Salem on March 29 and the second workshop will be in Bend March 31. A field trip to the Badlands Wilderness Study Area will be held the day after the Bend Workshop. Detailed information on the workshops will be distributed in the near future.

May 19 and 20 will find desert lovers once again at the Malheur Field Station south of Burns, Oregon for Desert Conference VI. This year the Conference will focus on wilderness and will be specifically for preservation activists. The emphasis will be on applied knowledge and insuring that our field efforts are getting done. Much of the agenda will evolve out of the February meeting in Bend. Press releases and detailed information will follow.

The first annual Basque Hills backpack will follow Desert Conference VI and will require a week's worth of walking in the wide open spaces. NOTE! I am aware that most people have busy schedules and may not be able to come to three meetings. You may not be able to come to any meetings at all. Or, you may not want to. But remember, wilderness preservation is a political process and positive results only follow organized sociopolitical efforts.

Attend a meeting or three if you can. If you can't or won't, contact me and let me know what you are doing regarding the desert preservation process.

What meeting will be best for you? The TWS workshops will be for general audiences and will cover a lot of basic information on BLM--our resources, the law, planning and politics. Audiences will be sizeable--over a hundred people.

The February meeting in Bend should be fairly small and provide numerous opportunites for dialogue.

Desert Conference VI will be an intense working session for preservation activists. A larger group is anticipated than the February meeting but smaller than The Wilderness Society workshops.

On a related note. A couple of months ago I send a list of names to Sunset magazine for information regarding future Sunset articles and schedules on wilderness trips this year. If Sunset has sent you a trip form please respond to it. If you have not received a trip form from Sunset and are interested in leading a tour of Wilderness Study Areas or RARE II areas this season please call me immediately!

Hope you are all enjoying the sunshine this bright new year.

Sincerely,

Don Tryon

Don Tryon
503-447-3508

Natural Resources Defense Council, Inc.

1725 I STREET, N.W.
SUITE 600
WASHINGTON, D.C. 20006
202 223-8210

December 2, 1983

Dear ESA Supporter:

In the past year, you have helped the Plant Conservation Project score a number of gratifying successes. These accomplishments would not have been possible without your continuing interest and support.

You will remember the increased number of species proposed for listing under the Endangered Species Act (ESA) since passage of our amendments last year. Twenty of those 35 species were plants. In addition, we have helped boost funding above Reagan administration requests for carrying out the ESA, especially for the state cooperative programs, conservation efforts by the Bureau of Land Management, and law enforcement. In addition, my lobbying against determined opposition at the CITES meeting resulted in granting greater protection to about 30 cactus species and several others threatened by over-collecting.

Next year, we must defend our hard-won achievements against anticipated attacks. President Reagan stated in his November 19 radio talk that he will try again to cut spending for domestic programs -- clearly including endangered species. We must respond with redoubled energy to preseve these vital programs. We must prepare for the reauthorization of the ESA in 1985. (Yes, again!) I also hope to build on our successes to strengthen further plant conservation programs which have not yet reached a satisfactory level.

My 1984 plans for the Plant Conservation Project include an initiative that I hope you will find as exciting as I do. Collaborators and I will prepare a series of upbeat, informative articles on endangered species and on efforts under the ESA and associated state programs to conserve them. The articles will focus on species found in particular regions of the

country so as to be of local interest. The articles will appear in approximately 1,500 local newspapers during the second half of 1984 -- timed to build public support for the ESA before Congress begins its work. While I cannot yet predict the political climate for the reauthorization, I do know that western water interests are already seeking ways to exempt their projects from the ESA. Under the circumstances, I consider this media project to be crucial to preserving the Act. Unfortunately, the project will be costly. For example, in order to increase the likelihood of the articles actually appearing, we will provide camera-ready copy and photographs. The costs of printing and distributing these articles will add almost $7,000 to the PCP budget.

In addition, I will step up pressure on U.S. agencies responsible for controlling collection of and trade in protected species. Progress evident in earlier years has now come to a standstill. The most recent trade data -- those for 1982 -- indicate that half the cacti imported into the U.S. still lacked required CITES permits. Hundreds of thousands of wild plants -- cacti, orchids, cycads -- from Mexico and the Dominican Republic entered the country in 1983 with improper permits. Control over our own exports may be even worse: in 1982, perhaps only one-third of our cactus exports had CITES permits.

NRDC is considering a wide range of actions -- including a lawsuit -- to end these apparent violations of CITES. Success here will have wide ramifications, leading to improved enforcement against all people who further threaten rare carnivorous plants, bromeliads, cacti and others by poaching them against U.S. or state laws, as well as CITES violators.

I hope you know how much I have appreciated your support in the past. I believe that I have earned your trust and that you will wish to continue contributing to the Plant Conservation Project by returning the enclosed card with your donation. Together we have done more than some thought possible. Let's continue!

Sincerely,

Faith Thompson Campbell

Faith Thompson Campbell, Ph.D.

? ? ?BEARGRASS BLOOMING CYCLE? ? ?

For some time I have been interested in the blooming cycle of *Xerophyllum tenax* (beargrass). I have found little or nothing in the scientific literature, vague folk-tales in popular accounts, and sparse data from personal communications. I would like to appeal to our membership for further information on the subject. Does anyone have personal knowledge of how frequently beargrass flowers? Does anyone know of any research done in this area? Please write to me if you can help. I will update my research in a future Bulletin.

Stuart Garrett, M.D.
361 NE Franklin
Bend, OR 97701

Stu Garrett is a member of NPSO's High Desert Chapter.

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December 12, 1983

Dear Colleague:

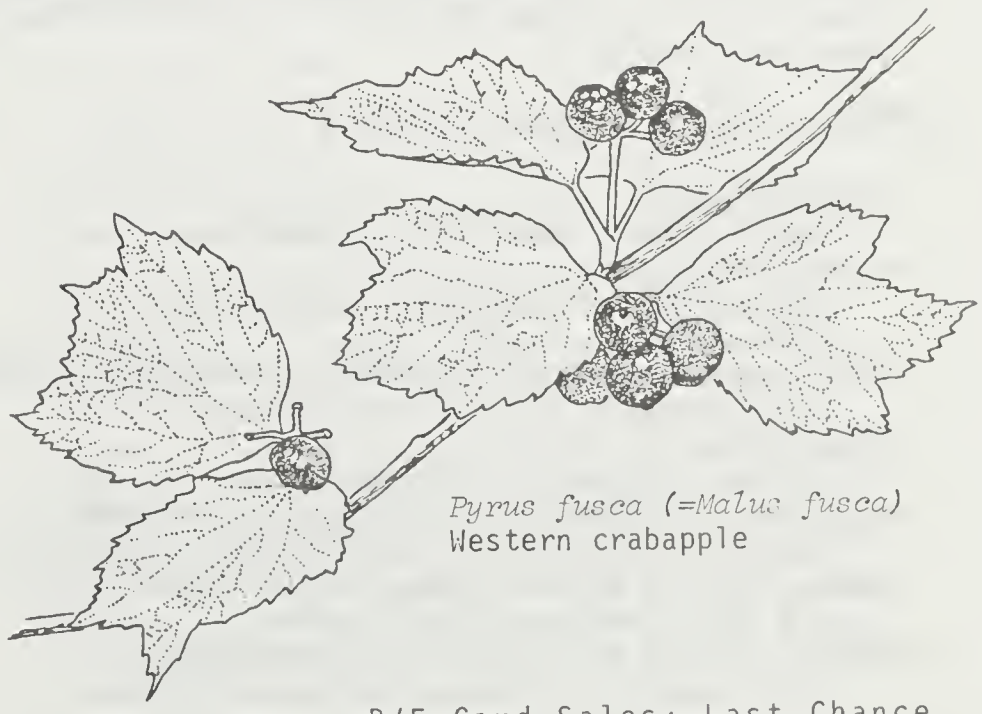
The National Wetlands Technical Council is interested in determining the distribution of experts in wetland management, research, administration and regulation in the United States. We are contacting you because your name was among those suggested by either The Wildlife Society, the Society of Wetland Scientists, the National Wildlife Federation or you earlier indicated your interest directly to the Council.

From this exercise we plan to develop several pools of names of persons who may wish to be advised of regional workshops on wetlands to be held by the Council and other agencies. If you return the enclosed card your name will be placed in an appropriate regional pool to be shared with several wetland agencies. You could expect to be contacted by them as workshops are planned.

I invite your participation.

Sincerely,

/s/
Joseph S. Larson
Professor and Chairman
(Executive Chairman, National Wetlands Technical Council)



Pyrus fusca (=Malus fusca)
Western crabapple

R/E Card Sales: Last Chance to get your Valentine gifts!
We have only 237 packs of the maize cards left. None of the first issue, the white ones, remain. There are only 56 packs of chocolate-colored envelopes left. $3.00 per pack if we mail them to you: Charlene Holzwarth, 2524 NE 34th Ave., Portland, OR 97212.

Malheur Field Station 1984 Classes

Malheur Field Station's 14th annual educational program consists of three three-week summer sessions, four week-long workshop sessions, an intensive 10-week spring term of courses and individualized research internships.
Pacific University of Forest Grove, Oregon operates the field station in cooperation with a consortium of 21 private, state and community colleges and universities in Oregon and Washington. Malheur Field Station is located 32 miles south of Burns, Oregon.
A deposit of $100 for each course must accompany registration ($200 for the 10-week spring session). SIGN UP EARLY--classes are limited in size and may be cancelled in the event of underenrollment. A few work-study positions are available; write to the Director for more information.
Detailed brochures describing course contents, the field station and its surroundings are available from the Director, MALHEUR FIELD STATION, P.O. Box 260-E, Princeton, Oregon 97721.

SPRING SESSION (March 25-June 2)

Deserts in Spring - a 10-week program of 4 integrated courses, with field study in Death Valley, Mohave, Sonoran, & Great Basin deserts. Course credit: 12 semester hr. or 18 quarter hr. *Instructors: Ellen Benedict of Pacific University, and field station staff.* Cost: $1,750 for everything.

SUMMER SESSIONS

All classes are 3 weeks long and carry 4 semester hr. (6 quarter hr.) of credit. Cost: $240 tuition for consortium members ($260 for non-members) plus $185 per 3-week session for room & board. Only 1 class may be taken each session.

SUMMER SESSION I (June 17-July 7)

Plant Ecology
Mark Bechard, Boise State University
Aquatic Ecology
Tom Dudley, University of California at Santa Barbara
Plant Taxonomy: Vascular Plants of Southeastern Oregon
Lucile Housley, Linfield College
Animal Behavior
John Mates, Lewis and Clark College
Fossils and the Record of Ancient Life in Oregon
Herb Meyer, University of California at Berkeley
Aboriginal Life Skills in the Northern Great Basin
Jim Riggs, Malheur Field Station
Natural History of the Northern Great Basin
John Snively, Clackamas Community College

SUMMER SESSION II (July 8-July 28)

Natural History
Ellen Benedict, Pacific University
Writing Poetry: Responding to the High Desert
Robert Davies, Pacific University
Field Ornithology
Carroll D. Littlefield, Malheur Field Station
Research Techniques in Field Botany
Ethen Perkins, Malheur Field Station
Advanced Aboriginal Life Skills
Jim Riggs, Malheur Field Station

SUMMER SESSION III (July 29-August 18)

Flintknapping Technology
Errett Callahan, Lynchburg, Virginia
Techniques of Wildlife Research
Deborah Davis, Malheur Field Station
Solar Hot Water Workshop
Larry L. Eddy, Blue Mountain Community College
Field Botany of Hart Mountain Flowering Plants
Karl Holte, Idaho State University
Algae and Fungi
B.E. Lippert, Portland State University
Steens Mountain: Regional Geology
Bruce Nolf, Central Oregon Community College
Field Entomology
Glenn Walthall, Beaverton Public Schools

WORKSHOPS

Workshops last 1 week, from noon Sunday to noon Saturday, and may be taken for college credit if special arrangements are made. Cost per workshop: $175 tuition, $110 room & board.

WORKSHOP A (March 18-24)

Anthropology of the Northern Great Basin
Jim Riggs, Malheur Field Station
Nature Photography
Robert Ross, Linn-Benton Community College
Wildlife Management
Steve Thompson, Nisqually Nat. Wildlife Refuge
Field Ornithology
Mark Stern, Oregon State University

WORKSHOP B (April 15-21)

Natural History Drawing
Susan Linkstedt
Desert Plant Population Studies
Teresa A. Maurer, University of Oregon
Ethnobotany of the Northern Great Basin & Columbia Plateau
Jim Riggs, Malheur Field Station
Natural History of the Owyhee River & Southeastern Oregon
Stephen E. Thompson, Klah Klahnee Wildlife Sanctuary; Don Shula, Clackamas Community College

WORKSHOP C (June 10-16)

Field Techniques for Environmental Assessment
Deborah Coffey-Flexner, Oregon State University
Ecology and Natural History of Insects
J. Lindsey Flexner, Oregon State University
Aquatic Ecology Workshop
Tim Hardin, Hardin-Davis, Corvallis, Oregon
Birding in Southeastern Oregon
Steven G. Herman, Malheur Bird Observatory
Natural History of the Malheur Country
John Snively, Clackamas Community College

WORKSHOP D (August 26-September 1)

Outdoor Watercolor Workshop
Caroline Buchanan, Buchanan Watercolors, Corvallis
Sights and Sounds of Malheur
Carol Cogswell, University of Oregon
Natural Drawing
Ron Mills, Linfield College
Introduction to Experimental Anthropology
Jim Riggs, Malheur Field Station

Conservancy update

The Nature Conservancy is continuing its efforts to locate, monitor, and protect rare and endangered native plants, animals and ecosystems in Oregon. Even though 1982 had been our most successful year to date, it looks like 1983 and 1984 may be even better! Several new preserves have been established throughout the state which contain healthy populations of important and disappearing species and habitats. The dedication of at least 3 or 4 additional areas in the not too distant future is likely. The following shows those special plants which occur on preserves acquired in the last 2 years:

Species Name	Status*
Arabis aculeolata (Waldo rockcress)	List 3
Aster curtus (white-topped aster)	List 1
Calochortus howellii (Howell's mariposa-lily)	List 1
Cardamine pattersonii (Saddle Mt. bittercress)	List 1
Cypripedium californicum (California lady's slipper)	List 3
Epilobium oreganum (Oregon willow-herb)	List 1
Erigeron decumbens decumbens (Willamette daisy)	List 1
Erigeron peregrinus peregrinus (wandering daisy)	List 2
Filipendula occidentalis (queen-of-the-forest)	List 3
Gentiana bisetaea (Waldo gentian)	List 1
Hastingsia bracteosa (large-flowered rush lily)	List 1
Lewisia columbiana rupicola (rosy lewisia)	List 2
Limnanthes floccosa grandiflora (wooly meadow-foam)	List 1
Lomatium bradshawii (Bradshaw's lomatium)	List 1
Lomatium cookii sp. nov. in ed (Cook's lomatium)	Review
Microseris acuminata (Sierra microseris)	List 3
Pilularia americana (American pillwort)	List 2
Saxifraga occidentalis latip. (Saddle Mt. saxifrage)	List 1
Senecio flettii (Flett's groundsel)	List 2
Senecio hesperius (western senecio)	List 1
Sidalcea nelsoniana (Nelson's sidalcea)	List 1
Synthyris schizantha (fringed synthyris)	List 3
Thelypodium howellii spectabilis (Howell's thelypody)	List 1

* status from "Rare, Threatened and Endangered Plants and Animals of Oregon" Oregon Natural Heritage Data Base, July 1983.

Overall, the Conservancy has 22 preserves on more than 32,000 acres in Oregon. This is part of a national effort that has protected more than 2 million acres in the 50 states. In Oregon, as in most states, areas for potential acquisition or protection are identified through analysis of the Natural Heritage Data Base. This data bank attempts to monitor all the threatened or otherwise sensitive elements that help to make up the state's natural diversity and to act as a statewide repository and distributor of such information. It now contains over 9000 computerized site records with about 6500 of these being on plants from Lists 1,2, and 3. New ones are being added each day. Extensive manual files and maps are also maintained.

The Data Base is now and will continue to work closely with and/or under contract to agencies such as the U.S. Forest Service, the U.S. Fish and Wildlife Service, the BLM, State Parks, and the Division of State Lands to maintain and update its files and to provide data as needed on species of concern. We would like to work more closely with NPSO in this capacity. Many members already are letting us know of their new discoveries and past records regarding T/E species. We hope more NPSO botanists will become involved. Your locality information will help us to accurately determine the status and protection needs of Oregon's rare flora! Please share your work with us! Thanks for your efforts.

Please send information to:
The Nature Conservancy
1234 N.W. 25th
Portland, OR 97210
Attn: Data Base

Endangered, threatened and rare plant associations and habitats of Oregon
by Jimmy Kagan

GREAT BASIN WILD RYE-SILVER SAGE BOTTOMLANDS

(Fifth in a series)

The Great Basin of the western United States encompasses much of southeastern Oregon, including most of Lake, Harney, and Malheur counties (Oregon's largest). This area is a geologist's paradise, composed of a series of fault block mountains, caused by cracking and shifting of the earth's crust. This series of faults, generally trending north and south, has also created a series of large basin bottomlands, interspersed with the fault block mountains. Many of these bottomlands were formerly beds of vast lakes, remnants of which still dominate many parts of the Basin, including the Warner Lakes basin and the Malheur and Harney lakes basin. Large areas have also become dry bottomland basins, such as Catlow Valley, Alkali Lake basin, and the Alvord Desert. Plant communities of these basins are both similar and vastly different; the communities to be found in any given area depend on local precipitation, amount of runoff, and the nature of the soil. Former lake beds, having no creeks or channels to drain them, lose all their water by evaporation and become extremely alkaline over time. Basins with continuous water input, or with some capacity for runoff or drainage, still have mostly neutral, non-alkaline soils.

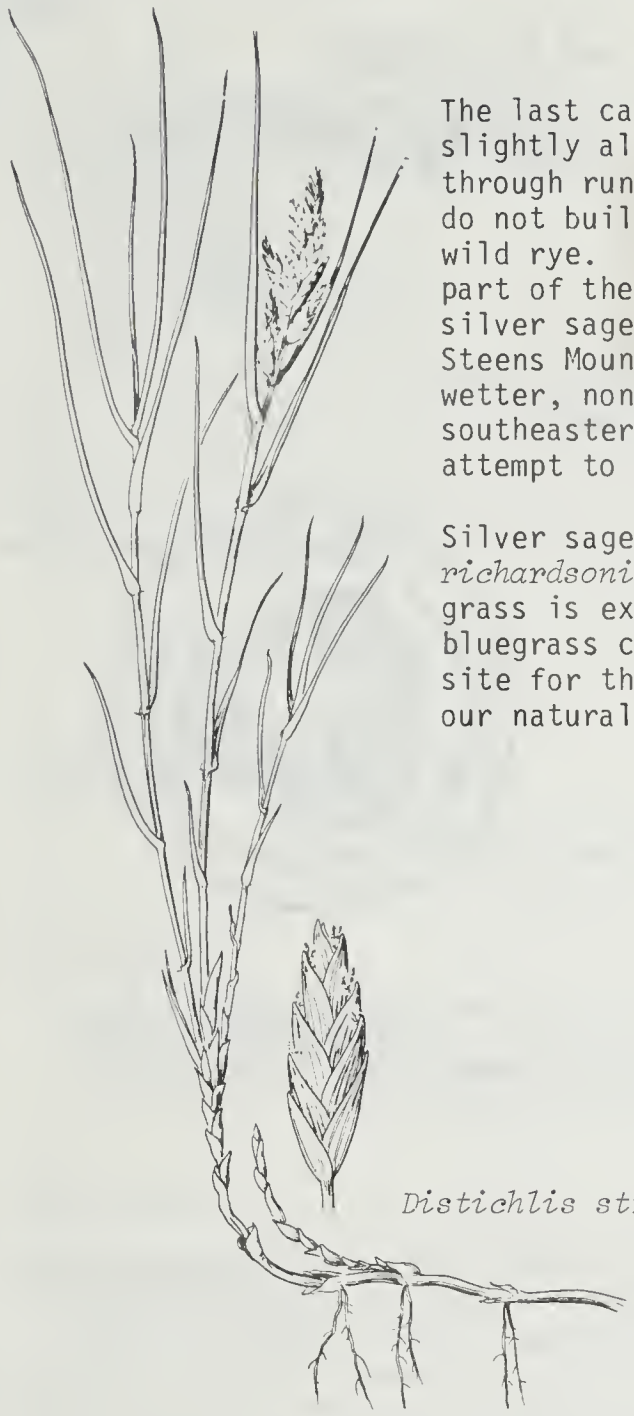
In these basin bottomlands, vegetation can be lumped into three categories: marshes, alkaline playas, and non-alkaline communities. Marsh communities, which are often associated with remnant lakes, will be discussed in future articles, along with the basin lakes.

Areas other than marshes that are associated with drying or dry lakebeds are extremely alkaline. If flat, they are often called playas. In southeastern Oregon, alkaline playas are usually unvegetated for much of the year. For short periods following rainfall, they can have dense blooms of annuals of herbaceous perennials, including spider flower *(Cleome)*, borax weed *(Nitrophila)*, and seablite *(Suaeda)*. In wet years they may be under water for months. They are often dominated in part by the strongly rhizomatous alkali saltgrass *(Distichlis stricta)*. The only shrub found in these very alkaline bottoms is black greasewood *(Sarcobatus vermiculatus)*, a species widespread in the Great Basin. Other shrubs which grow on alkaline playas include winterfat *(Ceratoides lanata)* and iodine bush *(Allenrolfea occidentalis)*. These two plants are at the northern limit of their ranges. Both are much more widespread in Nevada and Utah.

The only formerly widespread alkaline playa community which is currently threatened is the black greasewood/basin wild rye community. This community is often remarkably uniform, with 100% of the shrub cover made up of black greasewood (20-30% of the total cover), and with 90% of the herb cover made up of Great Basin wild rye *(Elymus cinereus)*. Basin wild tye is an incredible bunchgrass. When pioneers first saw these valley bottoms, they described them as having grasses which reached over their horses' bellies; and they were almost certainly describing basin wild rye. The bunches are usually one to two feet in diameter, and range from four to six (eight) feet tall. Because of its large size, its ability to tolerate both alkaline and non-alkaline soils, and its tolerance to occasional flooding, basin wild rye probably dominated many of these basin bottomlands. However, this bunchgrass is easily damaged by cattle and horses, and, although it has thick, coarse blades and is not especially palatable, cattle and horses both graze it. Heavy grazing has caused dramatic reduction in the amount of basin wild rye in the basin bottomlands of SE Oregon, and the species is often entirely eradicated by overgrazing. There are currently no protected examples of this community in Oregon. Most, if not all, of the high quality alkaline bottomlands dominated by black greasewood and basin wild rye are owned by the Bureau of Land Management in its Burns, Lakeview, and Vale Districts. Some of these areas need inclusion as RNAs in the Research Natural Area Program. A site near Serrano Point, south of the Alvord Desert, may be protected within a few years. All sites are currently being degraded by cattle and feral horse grazing, but basin wild rye has been doing rather well as a result of the very high rainfall these basins have received over the last few years.

Elymus cinereus

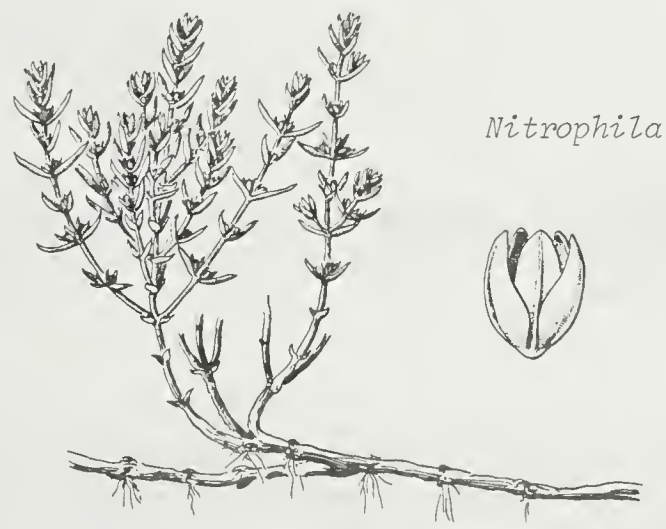
Drawings on these two pages by J. Janish, from Hitchcock et al., *Vascular Plants of the Pacific Northwest.*



Distichlis stricta

The last category of flat, bottomland vegetation embraces the non-alkaline (or slightly alkaline) types. These occur in areas where some of the water is lost through runoff, rather than all evaporating, so that high mineral and salt levels do not build up in the soil. Many of these bottomlands are also dominated by basin wild rye. Some of the wetter sites, with considerable runoff or standing water for part of the year, are dominated by silver sage *(Artemisia cana)*. I have only seen one silver sage/basin wild rye community, at several sites in Catlow Valley, just west of Steens Mountain; but I would guess that it was formerly much more common. These lower, wetter, non-alkaline areas are the most heavily grazed and intensively farmed areas of southeastern Oregon. The Nature Conservancy is currently working with the BLM in an attempt to protect the best of these sites.

Silver sage also grows in bands around vernal pools, with mat muhly *(Muhlenbergia richardsonis)*, and in bottomlands with Nevada bluegrass *(Poa nevadensis)*. Nevada bluegrass is extremely sensitive to grazing (cows love it), and this silver sage/Nevada bluegrass community has been almost entirely eradicated from Oregon. We hope a good site for this community can be located and protected. Otherwise, an interesting part of our natural heritage will be lost, perhaps forever.



Nitrophila occidentalis

>>>

NATIVE PLANT SOCIETY OF OREGON

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Vice President: Wilbur Bluhm, 743 Linda Ave. NE, Salem, OR 97303; 393-2934
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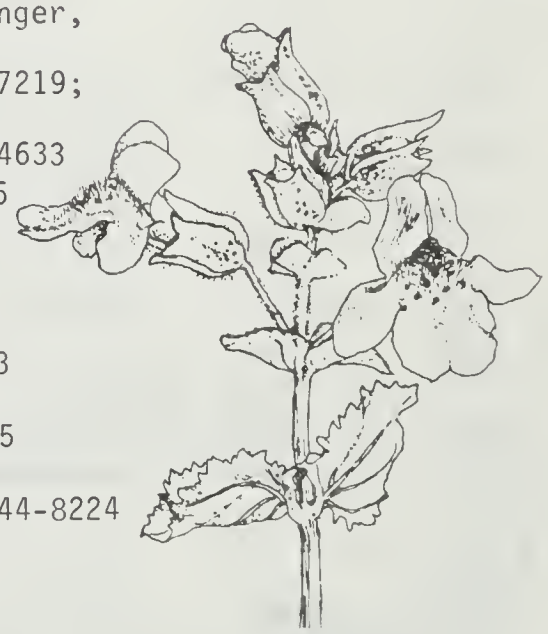

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THE NPSO BULLETIN is published monthly by the Native Plant Society of Oregon, incorporated under the laws of the state of Oregon. You are invited to join. Membership includes a subscription to the BULLETIN.
Send membership applications from the foregoing page or provided by Chapter presidents to:
Mary Falconer, Membership Chair: 1920 Engel Ave. NW, Salem, OR 97304
Send change of address (include old address & zip) to:
Mary Falconer, Membership Chair (address above)
Send BULLETIN copy to the editor by the 10th of the month (editor's address listed above).

The Editor
Native Plant Society of Oregon
c/o Berry Botanic Garden
11505 SW Summerville Avenue
Portland, OR 97219

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Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No.3 March 1984

CHAPTER NEWS

Blue Mountain

--- No scheduled meetings or field trips for March.

Corvallis

26 March, Mon. Meeting, 7:30 p.m., Cordley Hall, Rm. 2087, Oregon State University, Corvallis. Julie Kierstead will explain the purposes & procedures of the BERRY BOTANIC GARDEN SEED BANK FOR OREGON RARE & ENDANGERED PLANTS.

Emerald

ANNOUNCEMENTS:
1) Emerald Chapter is compiling a list of people for doctors to consult for plant (or parts thereof) ID in poisoning cases. If you would like to be on this list, contact Leighton Ho or Tom Seddon, M.D.
2) If you would like to set up a display at the Garden Club Show at Valley River April 7-8, contact Leighton Ho. Our participation hinges on volunteers.
3) Elections: Emerald Chapter will hold elections in March. The slate of nominees is: President- Leighton Ho; V.P.- Gaylee Goodrich; Secretary- Janelle Sorensen; Treasurer- Nancy Ruleman. (submitted by Charlene Simpson, Nominating Chair)
4) Wildflower ID class: Rhoda Love will be teaching a native plant identification series through the Amazon Center this spring--see announcement in this issue for details.

5 March, Mon. Meeting, 7:15 p.m., Red Cross Bldg., 150 E 18th, Eugene. A discussion of the 1984 FIELD SEASON ACTIVITIES OF EMERALD CHAPTER R/E COMMITTEE, with Charlene Simpson & Dave Wagner. This is the organizational meeting of our chapter's R/E Committee.

2 Apr., Mon. Meeting, 7:15 p.m., Red Cross Bldg. THE BERRY BOTANIC GARDEN SEED BANK FOR OREGON RARE & ENDANGERED PLANTS will be described by Julie Kierstead.

7 May, Mon. Meeting, 7:15 p.m., Red Cross Bldg. Wendell Wood of the Oregon Natural Resources Council will present a slide show on EIGHT DOLLAR MOUNTAIN.

High Desert

27 March, Tues. Meeting, 7:30 p.m., COCC, Room TBA. For information about this month's program, contact Chapter President Marge Ettinger, 382-2255.

Mid Columbia

7 March, Wed. Meeting, 7:30 p.m., Mosier School

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Portland

3 March, Sat. Workshop, 10:00 a.m., First United Methodist Church, 1838 SW Jefferson, Portland. MOSSES OF THE COLUMBIA RIVER GORGE with Faith Mackaness. Bring hand lens & notebook.

13 Mar., Tues. Meeting, 7:00 p.m., First United Methodist Church. Don Barr will present a slide show & program on SPRINGTIME IN THE MOJAVE. The focus will be on wildflowers of the western Mojave as well as some points of geologic interest.

WELCOME TO THE 1984 FIELD TRIP SEASON! None of these four trips involves long hiking--2 or 3 mile maximum. New members: if you have questions about our field trips, call any leader or Louise Godfrey, 223-4785. Bring lunch, liquids, any-weather apparel.

17 March, Sat. THE NORTH BANK. Our annual inspection of the earliest flowers on sunny (?) slopes, E end of the Columbia River Gorge. Meet at 8:00 a.m. at K-Mart, NE 122nd & Sandy Blvd. (exit I-84 at 122nd northbound), assemble at S end of parking lot; next stop 9:00 a.m. at Hood River Inn, ready to cross bridge. Leaders: Ruth Hansen, Keith Chamberlain.

24 March, Sat. ROCK ISLAND & Environs, along Willamette River S of Oregon City, much of botanical & geological interest. Meet at 9:00 a.m. at Handyman (Tri-Met Park & Ride lot), 15550 SE McLoughlin at Risley Ave. Leader: Dr. John Hammond.

31 March, Sat. KLICKITAT COUNTY; a stroll through open meadows above the Sylvus Creek drainage. *Viola sheltonii* beneath the oaks...Meet at 8:00 a.m. at K-Mart, NE 122nd & Sandy (see above). We'll cross Hood River bridge, regroup in front of winery in Bingen, WA at 9:30 a.m. Total driving distance about 175 miles. Leader: Elizabeth Handler.

7 April, Sat. MOSIER AREA, wherever our leader has discovered the prime displays. Meet at 8:00 a.m. at K-Mart (see above), & at 10:00 a.m. at Mosier exit from I-84. Leader: Keith Chamberlain.

Siskiyou

8 Mar., Thurs. Meeting, 7:30 p.m., Rm. 171, Science Bldg., SOSC. ALASKAN WILDFLOWERS - FROM THE BROOK RANGE TO SE ALASKA will be the program shared by Paul Alaback. The slide program covers the varied wildflowers, vegetation, & vistas of Alaska during backpack trips & a research project on understory & wildlife habitat relationships. Paul is presently on the faculty in Forest Science at OSU. Election of new officers will be held at this meeting.

Willamette Valley

19 March, Mon. Meeting, 7:30 p.m., First United Methodist Church, corner of State & Church Sts., Salem (in the Carrier Room, as usual). Our program this month will be THE NATURAL HISTORY OF STEENS MOUNTAIN by W.A. Sawyer, who is a nature photographer in E Oregon.

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« « VOTE FOR STATE OFFICERS - BALLOT ENCLOSED » »

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NPSO state president, Rhoda Love, will be teaching a WILDFLOWER IDENTIFICATION class this spring through the Amazon Community Center in Eugene. This field course will feature seven weekly field trips to natural areas in & around Eugene. Destinations will include: Willow Creek, South Hills Ridgeline Trail, Mt. Pisgah Arboretum, & others. The class will meet on seven Wednesday mornings from 9 a.m. to noon, beginning April 18 and ending May 30. Registration is limited to twelve people & is on a first-come basis. Registration at the Amazon Community Center begins on March 28; registration fee is $18.

MALHEUR FIELD STATION NEEDS COOK

Full time, seasonal cooking position available from April 1 to October 31, 1984. Room & board provided during employment. Duties include meal planning & preparation, serving & clean-up. Food service experience helpful but not essential. Applications for shorter periods of time also welcome. Send resume and references to Manager, Malheur Field Station, P.O. Box 260E, Princeton, OR 97721. *We are an equal opportunity employer.*

President's letter:

HIGHLIGHTS OF THE JANUARY 21, 1984 BOARD MEETING

The Board of Directors of the Native Plant Society of Oregon met on Saturday, January 22, at the State Forestry Dept. Office in Salem. Many thanks to Willamette Valley Chapter members Wilbur Bluhm, George Schoppert, and Mariana Bornholdt for arranging for the meeting room and providing refreshments.

The meeting was attended by representatives of Portland, Willamette Valley, Emerald, High Desert, and Corvallis Chapters. Also attending were a number of guests including Michael Fahey, vice-presidential nominee, and Susan Kephart, candidate for the Board of Directors. (All nominees and candidates were invited.)

All chapters present reported that they had arranged for field trips into proposed Wilderness Areas and sent schedules to SUNSET magazine. Willamette Valley Chapter distributed copies of its recently-completed plant list of the Salem area.

Our Membership Chairman sent word that membership renewals were coming in a bit ahead of last year and this assessment was verified by Nadine Smith, Treasurer. Julie Kierstead offered to cut costs with a smaller Bulletin, but was assured by the Board that they wished the Bulletin to remain as it has been. Shep Wilson distributed computer print-out lists of chapter members to each chapter president.

Jean Siddall was absent due to illness. Rhoda Love displayed a copy of the Federal Register for November 28, 1983, with the Fish & Wildlife supplementary list of all Federal Candidate Endangered Species. Rhoda also displayed a computer printout comparing the 1980 Federal list with the 1983 supplement for all Oregon species. This latter will be duplicated and a copy sent to each chapter. (Thanks to Faith Campbell of the NRDC and The Nature Conservancy for these lists.)

Rick Brown was absent due to a conflicting meeting. He sent word that the Legislative Committee is now reforming. Any member with ideas for draft legislation, lobbying techniques, and/or interest in serving on the NPSO Committee to work on an Oregon Endangered Species Act to be presented to the Legislature in 1985, please contact Rick at the address or number on the back of this Bulletin.

Portland Chapter, Emerald Chapter, and Willamette Valley Chapter indicated that they would contribute to the ONRC's multi-media slide show on Eight Dollar Mountain. (Other interested chapters or individuals should contact Wendell Wood, Oregon Natural Resources Council, Eugene, 344-0675.)

The NPSO Budget for 1984 was presented and approved in the form in which it appears elsewhere in this issue. A change in the state by-laws which would place the immediate past-president on the Board was proposed and passed. Mariana Bornholdt will work on this proposed amendment and it will be published in the April Bulletin.

Alan Curtis displayed a poster illustrating rare plant species and argued that the time was right for the NPSO to produce a poster which could be used for educational purposes. The Board voted to appoint Alan chairman of a committee to look into ways of financing an NPSO poster. Seeking funding from a charitable foundation was suggested.

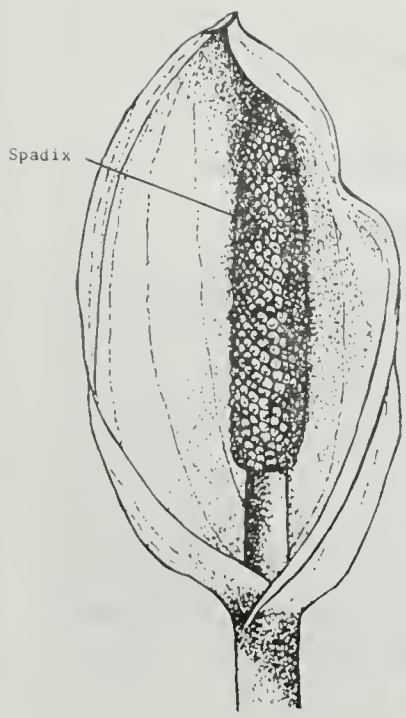
Chapters have been proceeding with their applications for tax-exempt status. Portland Chapter has received its certificate of incorporation from the State of Oregon. At this meeting the Board accepted the by-laws of Corvallis and Portland Chapters. Wilbur Bluhm was appointed to determine how recent changes in state laws will affect our efforts.

The Board approved an expense payment to Tammy Maurer who worked on the TV show which highlights our work to preserve rare plants in the Willamette Valley. Rhoda announced that plans will be made to have the video tape shown to our membership at the Annual Meeting in Bend June 1 and 2.

Finally the Board agreed with Ruth Hansen's suggestion that a meeting of our group with the native plant societies of Washington, Idaho, and California be planned to take place in 1985. Ruth was appointed chairman of the committee to begin planning the meeting.

I want to thank everyone who attended this, my last meeting as President of our Society.

--Rhoda Love



THE CHEATING OF THE WEST

The Feb. 1984 issue of *Natural History* magazine includes an excellent article about the invasion of western rangelands by cheatgrass *(Bromus tectorum)*. Entitled "Invaders at Home on the Range", it is written by Richard N. Mack, Professor of Botany at Washington State University in Pullman. *Natural History* is published by the American Museum of Natural History.

BERRY GARDEN FEATURED

The Berry Botanic Garden, a member-owned, non-profit garden in SW Portland, is featured in the February 1984 issue of *Architectural Digest*. The article is accompanied by stunning photographs of the Garden's woodlands, water garden, & rock garden. The Berry Garden is internationally known for its collections of native NW plants, alpines, *Rhododendron, Primula,* and *Lilium* species.

AN EASY WAY TO SUPPORT R/E PROGRAMS

Did you know our Society uses the money from our card sales to support our conservation causes? Each Chapter keeps 50¢ for from each packet of cards for their own needs, and the Oregon Rare & Endangered Plant Project receives the profit from the remaining $2.00.

If your local source is unavailable you may order packets from Charlene Holzwarth, 2524 NE 34th Ave., Portland, OR 97212. Please send $3.00 per packet.

ARBORETUM RECRUITING GUIDES FOR MAY TOURS

The Mount Pisgah Arboretum Outdoor Natural History Program, now in its third year of teaching, is gearing up for May, when Education Committee volunteers serve as guides along the one-mile Nature Trail loop for 5th-graders & their teachers. Each Tues., Thurs., & Fri. morning in May is set aside for the guided tours.

New volunteers are welcome. Being a guide is just one of the tasks involved in making the program a success--a few of the others are scheduling, hospitality, research, & volunteer coordination. A volunteer recruitment picnic, to explain the program in more detail, will be held at the Arboretum March 29, 1:30-4:00; bring your lunch to eat beforehand. A trial run, with all volunteers in action as if it were a May morning, will be held April 28 from 1:30-3:30, and is for all Arboretum members & their children as well as other interested participants & children.
For more information, call or write Linda K. Johnson, Education Chair, 88278 Millican Rd., Springfield, OR 97478; 747-4048.

R/E TAPES AVAILABLE TO CHAPTERS

A videotape on rare plant preservation in the Willamette Valley, entitled *Rare Plants: Problems and Promise in the Willamette Valley*, is available for NPSO chapter use, since the state NPSO organization has purchased two copies. One copy is suitable for TV broadcast (3/4"), and the other is for video showing (½"). To borrow either, contact Tammy Maurer, 2970 NW Tyler, Corvallis 97330, 752-6170; be sure to tell her which size you want. For a detailed description of the tape's contents, see the September 1983 NPSO *Bulletin*, p. 7.

SURVEY OF WILDFLOWERS, FLOWERING SHRUBS, FERNS, AND GRASSES OF THE COLUMBIA GORGE

The 1984 edition is now ready. This is the sixth year that Russ Jolley has made this very special booklet available to us. Grasses are included for the first time and there are more pages.
Copies will be available at Portland Chapter meetings and at the Annual Meeting in Bend. The price is $2.00 but if you wish to receive it by mail it is $2.50. Send a check made out to Portland Chapter, NPSO to:

Rhoda Lewis
3723 S.E. Roethe Rd.
Milwaukie, Or. 97222

GARDENS BY DESIGN, in SW Portland, is offering a series of 12 one-day Saturday workshops, beginning March 31. Classes of particular interest to NPSO members are:

#3 *Low Maintenance Landscape: A Naturalistic Approach*
(Natives & non-natives for natural gardens; labor-saving techniques)

#8 *A Japanese Touch for your Garden: Workshop II*
(Adapting native NW plants to create a Japanese feeling in your garden)

#10 *Invite Birds & Butterflies to your Garden*
(Creating backyard wildlife habitat; plant selection, garden design)

For a brochure with registration information and a complete listing & description of workshops, write to *GARDENS BY DESIGN, Suite 246, 5331 SW Macadam, Portland, OR 97201,* or call *242-9056.*

1984 Budget

Dear NPSO Board Members:

The following budget was approved by the Board of Directors of the Native Plant Society of Oregon at their Salem meeting on January 21, 1984. The budget differs from the proposed budget only in the addition of the $100 item budgeted for the Legislative Committee.

NPSO PROPOSED ANNUAL BUDGET for 1984
(January 1 - December 31, 1984)

ESTIMATED INCOME:

Balance brought forward	$1,000.00
Membership Dues (Est.)	6,500.00
Interest (Est.)	120.00
Notecards (Est.)	400.00
T-shirts (Est.)	80.00
TOTAL	$8,100.00

ANTICIPATED EXPENSES

Bulletin	2,496.00
Dues Refunds (@ 35%)	2,275.00
President's Expenses (@ $20/Mo.)	240.00
Membership Chair	215.00
R/E Chair	400.00
Legislative Committee	100.00
ONRC	100.00
Annual Meeting (up to)	100.00
Treasurer (@ $5/Mo.)	60.00
State of Or. Non-profit Status	6.00
Board & Committee Expenses (not including travel or above)	50.00
TOTAL	$6,042.00

(Note: No travel expenses have been budgeted for in 1984.)

Thanks to the Budget Committee: Alan Curtis, Nadine Smith, Charlene Simpson, and Larry Scofield who helped me draft the budget.

Rhoda Love
President
January 22, 1984

BOTANY AND PLANT ECOLOGY COURSES OFFERED AT MALHEUR FIELD STATION

A broad selection of field courses in botany is available at Malheur Field Station to plant lovers. College credits are awarded through Pacific University for completion of week-long spring workshops and three-week summer sessions. Located between Burns and Frenchglen in the heart of Oregon's Great Basin Desert Country, Malheur Field Station boasts access to lush alpine meadows, vast fresh water marshes, and huge expanses of sagebrush desert edged in juniper-covered rimrock slopes. Over 850 species of plants abound in the region.

Native American uses of wild plants will be the focus of an intense workshop offered by Jim Riggs April 15-21. An instructor at Malheur for many years, Riggs has been acclaimed by Jean Auel in her bestselling novel, Valley of the Horses, for his inspiring instruction and insights into prehistoric Indian living.

The ecology of desert plant populations is the theme of an April 15-21 workshop led by Teresa Mauer from the University of Oregon. Emphasizing the dynamics of plant-environment interactions, the course will explore unique adaptations of desert plant populations. Ms. Maurer has studied and taught extensively in environments from deserts to seacoasts, offering courses on such topics as microcomputer applications to field studies.

Workshop courses are available for two semester hour credits but also may be taken on a non-credit basis. Total fees are $295 and include tuition, room, board and course travel expenses. There is a $100 registration deposit fee which applies to the cost of each course.

Summer session coursework in botany at Malheur Field Station includes five courses in three sessions. Plant ecology, taught by Dr. Marc Bechard of Boise State University, and taxonomy of vascular plants, offered by Lucile Housley, coordinator of Linfield College's acclaimed Elder Hostel Program, are offered from June 17 to July 7. Dr. Ethen Perkins, Director of Malheur Field Station, will lead a course in research techniques for field botany, July 8 to July 28. Field botany of Hart Mountain flowering plants, taught by Dr. Karl Holte, curator of the Idaho State University herbarium, and a special topics course on algae and fungi led by Dr. B. E. Lippert of Portland State University are available from July 29 to August 18. Courses are offered for four semester hour credits through Pacific University and can usually be transferred as 6 quarter hours. Total cost is $445.

A full spring term program of courses focusing on North American Deserts is also available through Malheur Field Station. Eight of the 12 credits in the ten-week course, titled Deserts in Spring, are given for studies of vascular plants and ecology of North American Deserts. Dr. Ellen Benedict, adjunct professor at Pacific University, will be the instructor for the course which begins March 25 and travels over 4,000 miles throughout the western deserts during their prime blooming time. Total cost for the course is $1,750 ($200 deposit included).

Students at Malheur often range in age from high school juniors and seniors to senior citizens, and come from diverse careers and backgrounds. The small class size and intensive field courses, taken one at a time, provide unique opportunities for group learning experiences and exciting possibilities for individual growth. For information regarding visitor usage rates, registration, financial assistance, and other courses through Malheur Field Station, contact Ethen or Mary Perkins, Director/Managers, Malheur Field Station, P.O. Box 260E, Princeton, OR 97721, (503) 493-2629.

NPSO Annual Meeting: June 2-3

Because this year's annual meeting field trips cover more miles than usual, we are arranging to use a bus or vans for group transportation. This will make it easier for the field trip leaders to keep track of and talk to their groups, and movement during the trips should be quicker and more efficient.

Information packets for those who register will be given out on Friday afternoon, June 1, in the Sunriver Lodge, or on Saturday morning, June 2, at the Nature Center before the field trips. A map in the May *Bulletin* will show how to get to these two places.

Extra registration forms and schedules will be mailed to each chapter.

Camping facilities are not available in Sunriver, but Forest Service campgrounds are nearby.

SCHEDULE OF EVENTS

1984 NPSO Annual Meeting

Friday, June 1

2:00 to 5:00 p.m. Canoe Float, departing from the Sunriver Marina

1:00 to 7:00 p.m. Pick up registration materials at the Sunriver Lodge

Saturday, June 2

Three simultaneous field trips, departing from the Nature Center. Return times are approximate. Registration materials can be picked up at the Nature Center before the field trips.

8:00 a.m. to 4:00 p.m. Lawrence Grassland field trip, led by Tammy Maurer

8:00 a.m. to 4:00 p.m. Black Hills field trip, led by Ginny Crosby

9:00 a.m. to 4:00 p.m. Squaw Creek/Metolius area field trip, led by David Danley

In the Great Hall:

6:45 p.m. No-host wine social

7:30 p.m. Banquet

8:30 p.m. Business meeting

9:00 to 9:45 Program by David Danley

Sunday, June 3

9:00 to 11:00 a.m. Board of Directors meeting in the Lodge

10:00 a.m. & 12:00 a.m. Sunriver Wildflower Forays. Meet at the Nature Center.

1:30 to 3:30 p.m. Field trip to the Oregon High Desert Museum. Meet in front of the Museum.

LODGING INFORMATION FOR ANNUAL MEETING

An economical alternative for housing at the annual meeting is rental of a condominium with bed space for six people. Cost is $99.00 per day, and cooking facilities are included.
A group of Tennis Village condominiums has been set aside for our meeting. These units will be held until May 1, when they will again be available to the general public on a first-come basis. There are two bedrooms with king, double, or twin beds, plus a loft area with two twin beds. Rental entitles the occupants to free use of Sunriver Lodge's amenities, including swimming pool, sauna, and hot tubs. Racquet Club facilities are available on request when you make your reservation.

To reserve a condominium for your party, send a deposit of $99.00 to cover the first night's lodging to:

Lodge Sales Department
Sunriver, OR 97702
1-800-452-6874 in Oregon
1-800-547-3922 in other states

continued on the next page

A full refund can be obtained up to seven days before your stay is to begin.
Additional housing information can be obtained by contacting the Nature Center. We can also assist people who need help in making up parties of six, but actual reservations must be made through the Lodge Sales Department.

David M. Danley
Sunriver Nature Center
P.O. Box 3212
Sunriver, OR 97702
593-1221 ext. 394

MORE ON THE FIELD TRIPS

BLACK HILLS FIELD TRIP - Ginny Crosby, leader

The Black Hills are an isolated range of basalt hills located three mi. S of the town of Christmas Valley in the sagebrush desert region of southcentral OR. These hills rise some 800 ft. above the sagebrush-greasewood flats of the ancient Pleistocene lakebed below.

Most of the Black Hills are covered in a western juniper/big sagebrush/bluebunch wheatgrass community. Barren ridgetops & large outcrops of volcanic tuff are dominant features. One such area, in the center of the Hills, gives the appearance of a moonscape; but on closer examination you'll see the ground is covered with small annuals & perennials. Here rare *Eriogonum cusickii* grows, one of only three locations in the world. *Cymopterus bipinnatus*, a species rare to Oregon, also grows here. To protect these rare plants & their habitats the Bureau of Land Management closed the area to all off-road vehicle use in 1981.

A wide array of plant species both common & rare in the SE desert region can be seen here--some we will see on this trip are *Lewisia rediviva, Erigeron bloomeri, Dimeresia howellii, Eriogonum ovalifolium, Astragalus curvicarpus, Cryptantha celosioides, Silene scaposa* var. *lobata, Hymenopappus filifolius, Senecio canus, Townsendia florifer, Ribes cereum,* & *Penstemon speciosus*, to name a few.

The field trip will include excellent views of the desert around Christmas Valley & could include a stop at Fort Rock State Park if there is time & interest. Supplies, lunches, & water can be picked up in Christmas Valley. We will be walking through the Black Hills so hiking shoes are advised. The hike is not too difficult, but the soil may be loose & pebbly. Overall the trip is rated moderate in difficulty. Distance covered will be about 250 mi. round trip.

*

LAWRENCE GRASSLANDS FIELD TRIP - Tammy Maurer, leader

Located in the arid steppe region of central OR near the S boundary of the Columbia Basin, the Lawrence Grasslands Preserve (owned by The Nature Conservancy) encloses a 400-acre example of biscuit-scabland topography. Native bunchgrasses found on the biscuits (mounds) include *Festuca idahoensis* & *Agropyron spicatum*. The shallow-soiled "scab" area & the rock rings surrounding the biscuits support *Trifolium macrocephalum, Allium, Delphinium, Phlox, Lewisia, Eriogonum, Penstemon,* & many species of *Lomatium*. In early June the bunchgrasses should be a beautiful sight, along with the purple haze of lupine flowers, & we should be able to find well over half of the 159+ species recorded at the preserve. There are 5 spp. of plants which were considered for R, T & E status; only *Claytonia umbellata* & *Collomia macrocalyx* are still being watched. The *Claytonia* flowers too early for our trip, but we may be able to find *Collomia*.

The trip will offer a chance to compare groups of species in varied habitats--ravine bottoms, mounds, scabs, rings, rocky talus slopes, & drainages are all to be found in the area. In addition, there should be ample time to discuss the land use, geology, management, & natural history of this interesting area.

The trip will be geared to the desires of the participants. Many plants can be seen without strenuous walking--a ladder stile is used to enter the fenced preserve from the road--but the Grasslands are best seen via a 2-3 hour walk covering both its drainages & plateaus. And, for the real explorers, the canyon area N of the preserve offers good additional opportunities.

Come equipped for a variety of weather conditions; even in June the weather may suddenly turn cold, windy, & wet since the preserve lies at an elevation of 3400 ft. (But the probability of a sunny day is high.) If you wish to explore the canyon, you'll need waterproof footwear wince the bottom is somewhat marshy. Also, be aware that the soil structure on the preserve may be damaged by heavy lug-soled boots. Bring a lunch to eat at the old Rooper Ranch homestead. Bird lovers should bring binoculars, and even if you don't like birds they will come in handy! Collectors will be horsewhipped.

Prior to the trip, further detailed information & plant lists are available from Tammy Maurer, 2970 NW Tyler, Corvallis, OR 97330; 752-6170.

*

SQUAW CREEK/METOLIUS FIELD TRIP - David Danley, leader

This trip will cover a variety of habitats, including sagebrush steppe, ponderosa pine, scabland, & riparian areas. Emphasis will be on native bunchgrass communities, & the general ecology of grasslands. Squaw Creek is in the Crooked River National Grassland, a Forest Service Wilderness Study Area.

Several species of *Lupinus, Astragalus,* & *Penstemon* will be seen, including the rare *Astragalus peckii,* & possibly also *Penstemon peckii*. An unusual plant present in the scabland is *Linanthus bakeri*. Altogether, over one hundred species should be found.

Travel will be mainly by vehicle, interspersed with a series of short, easy walks. Distance is about 120 mi., round trip.

* * *

R/E News

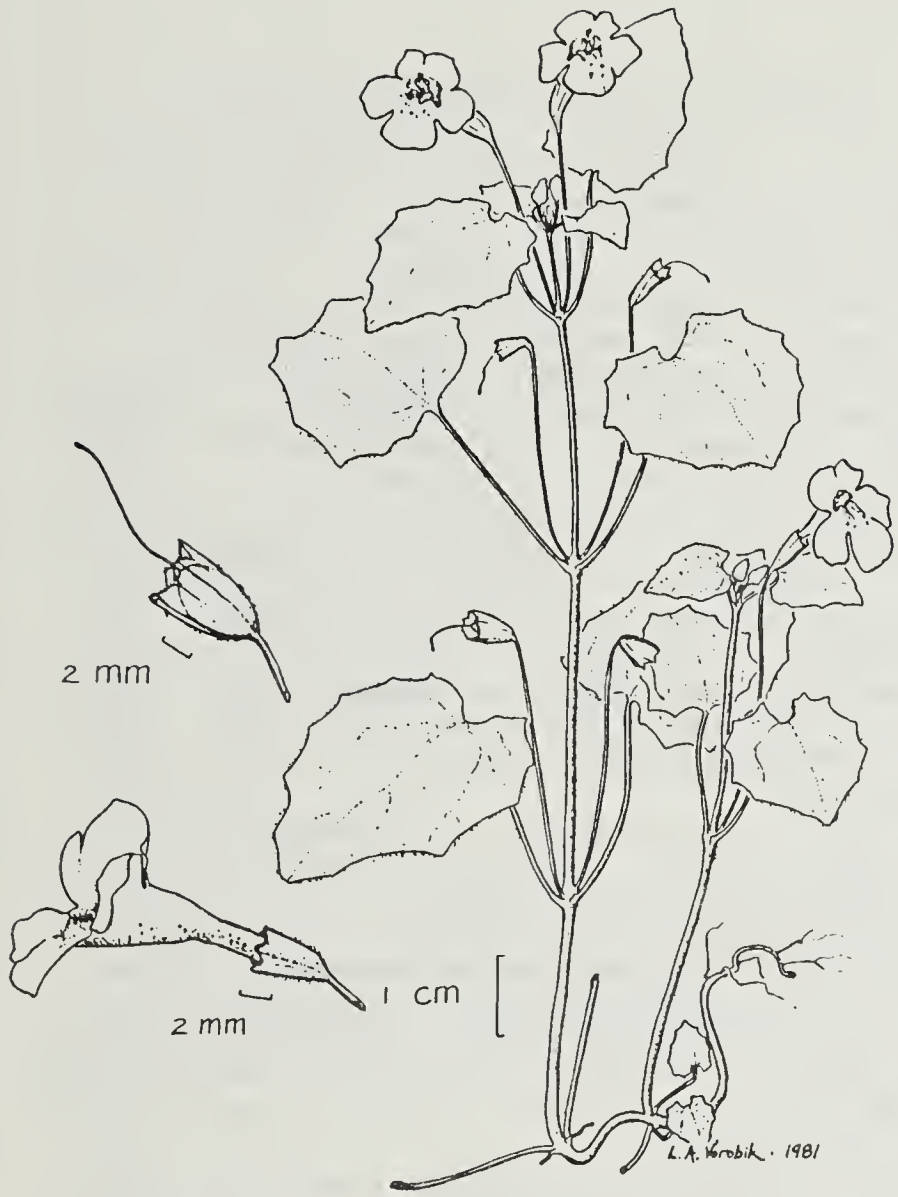
This month's subject is *Mimulus hymenophyllus*. The following description, text, and chart are excerpts from: Meinke, Robert J. 1983. *Mimulus hymenophyllus* (Scrophulariaceae), a new species from the Snake River Canyon area of eastern Oregon. Madrono 30(3): 147-152.

MIMULUS HYMENOPHYLLUS Meinke. Delicate perennial herb, typically growing in masses, prostrate to suberect, sparsely glandular-villous with slimy-viscid transparent hairs less than 0.8 mm long; stems few to several, fragile and thin, 0.5-2.5 dm long, winged, arising from numerous reddish-orange capillary rhizomes, sparingly branched throughout, with long internodes; leaves few, cauline and basal, generally 3-7 opposite pairs per primary stem; leaf blades thin, filmy, broadly lanceolate to ovate, acute, subpalmately veined, 1.0-3.5 cm long and equally wide or slightly less, shallowly denticulate to nearly entire, broadly triangular at the base and tapering or occasionally cordate; petioles of cauline leaves equal to or usually exceeding the leaf blades, generally less than the internodes, diverging, prominently winged; flowers in axillary pairs; pedicels narrower than the petioles, slightly winged at the base, reflexed or usually ascending, ranging from 0.5-1.8 times the petiole length but seldom exceeding the blades; calyx green, the tube narrowly triangular and evidently angled, acute at the base or slightly rounded, with scattered glands on the angles, calyx in its entirety (2.5-)3.5-5.5(-6.0) mm long at anthesis, moderately inflated in fruit, becoming campanulate but not lengthening significantly, up to 7.0 mm long and nearly as wide; calyx teeth equal, 0.5-1.2 mm long, about half again as broad, deltoid and abruptly acute in flower, rounded and mucronate in late fruit, with simple acerose eglandular cilia on the margins; corolla funnelform, weakly bilabiate with an open orifice, (15-)18-28 mm long (3-4 times the length of the calyx), light yellow with scattered red or purplish dots on the throat and lower lobes, puberulent externally with a tuft of thickened yellow hairs on the inner lower lip, the tube half again as long as the calyx, the throat moderately flaring, the lobes short and spreading, typically entire or apically notched; stamens glabrous, included, 1/2 - 3/4 the length of the corolla; style glabrous or with a few hairs, included, exceeding the stamens; stigma lips ± equal and rounded, glabrous or not; capsule essentially glabrous, oval to rounded, the tip abruptly apiculate to shallowly retuse, barely included in the calyx tube at maturity, 3.0-6.0 mm long and 2.5-5.7 mm wide, short stipitate, the placentae firmly adherent; seeds ovoid to oblong, blunt, longitudinally wrinkled, (0.5-)0.65-0.85 mm long, 25-70(-95) per capsule...

*

TABLE 1. Morphological & Ecological Distinctions between *M. hymenophyllus* Meinke and *M. jungermannioides* Suksdorf.

Character	*M. hymenophyllus*	*M. jungermannioides*
Morphology		
Reproduces vegetatively from subterranean buds	No	Yes
Pubescence	Sparse, hairs all less than 0.8 mm	Moderate to very heavy, many hairs 1.0-1.5 mm
Fruiting pedicels	0.5-1.8 times petiole length	(2.5-)4-15 times petiole length
Calyx length	3.5-5.5 mm in flower, barely longer in fruit	5.0-9.0 mm in flower, up to 12.5 mm in fruit
Corolla length	18-28 mm, 3-4 times calyx length	14-20(-24) mm, 1.8-3 times calyx length
Capsule	3.0-6.0 mm long, rounded to ovate, mucronate	5.0-9.0 mm long, elliptic to lanceolate, attenuate
Seeds	0.65-0.85 mm long, 25-70(-95) per capsule: $\bar{x}$ = 45	0.35-0.5 mm long, 75-200 per capsule: $\bar{x}$ = 135
Ecology		
General habitat	Within mesic coniferous forest type	Within xeric sagebrush-bunchgrass type
Elevational range	Ca. 850-1300 m	Ca. 95-370 m



Mimulus hymenophyllus
Drawing by Linda A. Vorobik

Mimulus hymenophyllus is restricted, insofar as is currently known, to the deep canyons of Horse and Cow Creeks in SE Wallowa County, Oregon at altitudes from ca. 850 to 1300 m. Populations of the species are scattered on steep cliffs of gray basalt with western or southwestern aspects, occurring within narrow, isolated bands of *Pseudotsuga menziesii-Pinus ponderosa* forest maintained by the northerly downward flow of cool air from the Wallowan uplands. ... There are several other similar drainages in the area which although unexplored are anticipated to shelter populations of *M. hymenophyllus* as well.

Flowering is initiated in late April and continues more or less continuously through August or early September, depending on elevation and available moisture. Capsules first mature in late May or early June.

Mimulus hymenophyllus apparently is most closely related to *M. jungermannioides* Suksdorf (sect. *Paradanthus*), a localized perennial endemic to basalt outcrops in the Columbia River Basin of north-central Oregon and reputedly adjacent Washington...The two species possess lax habits of similar form and size, both being adapted to crevices in steep, basalt cliffs overlooking riparian habitats. In addition, their pubescence type, shape and venation of the leaf blades, and calyx construction are essentially identical. There are a number of marked morphological and ecological differences between the taxa, however, amply justifying separation at the species level. These data are outlined in Table 1...

Mimulus hymenophyllus is noteworthy in that it is the single member of its large genus that may be endemic to Oregon. Although it has been recorded from only a few small populations, it exists in remote country far from significant disturbing influences. Development of this area in the forseeable future by government or private interests appears very unlikely. Therefore, despite its overall rarity and limited occurrence within its range, this species should not be considered threatened or endangered at this time. Periodic monitoring of its populations is recommended.

Mimulus hymenophyllus should be looked for in NE Oregon & adjacent Idaho, to determine its true extent and numbers.

Jean Siddall
State R/E Chair

Jean's signature was inadvertently omitted from last month's R/E News.

? ? PRICE SUPPORTS FOR STRIP MINING RARE PLANT COMMUNITIES? ?

Apparently there are many ways that mining companies can make it profitable to extract minerals from the earth. The current method is lobbying in Congress for funds to subsidize domestic production of cobalt. If this attempt is successful, then the effect on Oregonians, northern Californians, and all who enjoy the Siskiyou Mountains will be immediate and dramatic.

BACKGROUND

The Defense Production Act of 1950 allows the Department of Defense to stockpile strategic minerals necessary for national security. It also provides a guaranteed market for domestically produced strategic minerals at artificially high prices.

Authorization for the Act ran out in September 1983; partly as a result of successful efforts by the Smith River Alliance to block re-authorization. However, Congress and the Executive branch are anxious to see that the Act is re-authorized in an acceptable form, and they intend to do so by March 31, 1984.

Current world market prices for cobalt are around $5.75/lb. The Interior Department and the President's advisors are proposing to pay $25.00/lb. for domestically produced cobalt. They are asking Congress to appropriate $200 million for 1984 and $300 million per year thereafter for all strategic mineral price supports. Cobalt will take the lion's share of this at $132 million/year.

The Administration has only now become enthusiastic about this proposal. Recent lobbying by mining interests, especially Cal Nickel Corporation, has been obviously effective.

There is very little cobalt currently produced in the U.S. It is more plentiful elsewhere on the planet and we fill our cobalt needs by buying outside our borders at reasonable prices. Only three locations in the U.S. are considered, even remotely, as extraction sites. One is the Cal Nickel Corporation's Gasquet Mountain Mine site on the North Fork Smith River, just over our border into California.

The Gasquet Mine project is far along in its developmental stage: claims filed, permits issued, test projects complete, etc. Cal Nickel knows what the earth will yield and what it will cost them to take it out. The plan is for a large scale surface strip mining of low grade ore for chromium, cobalt, and nickel. It is not economically worth it today. If the day comes when cobalt or chromium brings a high price, they will begin.

How much will it cost us? Cal Nickel estimates full-swing cobalt production at the Gasquet Mine can be 2 million lb. per year. At the proposed $25/lb. price, we will be giving Cal Nickel 30-50 million tax dollars per year until our nation's stockpile requirement is met. At that point we will have bought from Cal Nickel for $1.2 billion what we could have bought for $210 million on the world market.

GASQUET MOUNTAIN TO EIGHT DOLLAR MOUNTAIN

It is 32 crow miles from Gasquet Mountain on the Smith River to Eight Dollar Mountain in the Illinois Valley of Josephine County, Oregon. Most of this stretch is our public land, managed by the U.S. Forest Service and Bureau of Land Management. This part of the Siskiyous is generally known as the "great peridotite sheet". It is not sheet-like in appearance, though, being highly worked by geomorphic forces into steep mountains and remote stream canyons. It is the largest continuous mass of peridotite and its metamorphic form, serpentine, in North America.

Botanists have long been aware of the high plant species diversity in the Siskiyou Mountains, and interest in the peridotite country has been especially keen. Many of the species currently considered rare, threatened, or endangered in Oregon and California are peridotite and serpentine endemics. This land is worthless for agriculture or forestry. Major disruption of the native plant communities can only come from mining.

Eight Dollar Mountain, rising in the middle of the Illinois Valley, is known to be the next richest ore deposit after Gasquet Mountain. Eight Dollar Mtn. is also known to have the richest concentration of sensitive (T & E) plant species in Oregon. At last count, 28 plant species considered sensitive by the U.S. Forest Service have a home here. Active preservation efforts for Eight Dollar Mountain have been pursued for many years by The Nature Conservancy, Sierra Club, ONRC, and NPSO.

Mining rights are old and well established. We cannot expect them to be changed. The law is clear: if a claimant can profitably extract the minerals, then that land is subject to whatever is necessary to force the value out of it. If federal price supports make it profitable to open the Gasquet Mine, then it is highly likely that Eight Dollar Mtn. will follow.

It is hard to say how much of the peridotite country of Josephine and Curry Counties could be potential strip mines. The effects on the environment from these particular mining and extraction techniques is staggering. Because the good ore is usually a thin surface layer, many square miles at any site will be stripped. Sulfur dioxide emissions from the smelting process will give us our first real taste of acid rain. The tailings (the bulk of the ore in this case) are slated to be spread back over the surface in the mined area and revegetation attempted. The tailings from a text project at Gasquet Mtn. had a water infiltration rate of one-tenth inch per hour. This is in an area which commonly gets over 150 inches of rain a year. One can imagine what this massive runoff will do to water quality in the North Fork Smith River, currently claimed to have the clearest water of all California rivers. There has never been a successfully reclaimed strip mine on these types of soils anywhere in the world.

continued on the next page

NATIVE PLANT SOCIETY OF OREGON

ELECTION OF STATE OFFICERS
March, 1984

B A L L O T

Mark box for each candidate you wish to vote for

PRESIDENT	Franklin (Herm) Fitz	☐
VICE PRESIDENT	Michael D. Fahey	☐
SECRETARY	Jeanne Huffstutter	☐
TREASURER	Marjorie Ettinger	☐

DIRECTORS: VOTE FOR THREE

Floyd Hendron	☐
Susan R. Kephart	☐
Gordon Larum	☐
Rhoda Love	☐
Naoma Neyerlin	☐
Barbara Robinson	☐
Veva Stansell	☐

MAIL BALLOT PROMPTLY TO THE ADDRESS PRINTED ON THE BACK OF THE BALLOT.
ENVELOPE NOT NECESSARY: FOLD SO ADDRESS SHOWS, & AFFIX 20¢ STAMP.

Native Plant Society of Oregon
c/o J.R. Kierstead
12711 SE Bush St.
Portland, OR 97236

1984 NPSO ANNUAL MEETING AT SUNRIVER

June 1, 2, and 3

REGISTRATION FORM

For those events requiring advance reservations.
Please return by April 30.

	Number of People	Total Cost
Friday, June 1		
Canoe Float $3.00 per person 2:00 p.m. to 5:00 p.m. Departs from the Sunriver Marina	_____	_____

Saturday, June 2

Each person will choose one of the three field trips. Departure is from the Sunriver Nature Center. Please indicate the number of people in your party who will be going on each trip:

	1st Choice	2nd Choice
1. Squaw Creek/Metolius 9:00 a.m.	_____	_____
2. Lawrence Grassland 8:00 a.m.	_____	_____
3. Black Hills 8:00 a.m.	_____	_____

Group transportation is available at a cost of $9.00 per person. Total number who will be using group transportation:	_____	_____
Evening Banquet in the Great Hall 7:30 p.m. $14.00 (includes gratuity)	_____	_____

Sunday, June 3

Field trip to the Oregon High Desert Museum 1:30 p.m. to 3:30 p.m. Admission*: $1.50 for adults .75 for children 6-12 *Free to OHDM members	_____	_____

TOTAL AMOUNT ENCLOSED _____

Name_____ Phone_____

Address_____ ☐ Send information on housing.

Please make checks payable to the High Desert Chapter, NPSO.

Return this form to: David M. Danley
Sunriver Nature Center
P. O. Box 3212
Sunriver, OR. 97702

WHAT'S IT WORTH??

The Defense Production Act of 1950 was passed with good intentions. Certain hard-to-come-by minerals are vital to ensure the health of the domestic economy and national security. Stockpiling of these substances is prudent in case our supply from outside the nation is disrupted. Price supports for domestic production in the event of a national emergency is also a reasonable alternative.

We are not experiencing an emergency supply problem, however. It is now contrary to the nation's interest to pay outrageous prices for domestic cobalt when it is readily obtainable from foreign sources. Both the Government Accounting Office and the Congressional Budget Office have condemned this price support as fiscally unsound. Indeed, in the absence of mining interest lobbies, it would be hard to imagine that this subsidy would be seriously proposed by the Administration.

None of Oregon's Senators or Congressmen is on the committees dealing with re-authorization of this Act. However, their voices are heard clearly in Washington. I should think they would all jump at the chance to help save taxpayers' dollars and the environment in one voting. Title III is the portion of the act which promotes the $25/lb. price for cobalt and massive strip-mining in the Siskiyous. They all need to be informed on this matter.

It would be tragic to see money from our own pockets paying for the permanent wasting of our ecological treasures.

Wayne Rolle
Siskiyou Chapter

IMPORTANT ADDRESSES

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.
Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.
Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.
Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.
Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.
Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.
Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.
Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.
William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.
Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

Monroe Parcel Should Stay Public

The BLM Salem Office is eager to sell a 1.46-acre parcel of land in Benton County just north of the Lane County line near the town of Monroe. A collection of Sidalcea was made on the property last summer and David Wagner of the University of Oregon Herbarium has identified it as Sidalcea nelsoniana (Nelson's checker-mallow), a perennial Sidalcea that is listed as a Category 1 species (most endangered) on the current Federal List of Candidate Threatened and Endangered species. (See the Federal Register, Nov. 28, 1983.)

This parcel of land is of no obvious commercial value and is geographically separated from the BLM's other holdings, thus they are eager to be rid of the responsibility of holding on to it. In fact, the Bureau is so eager to sell the Monroe parcel that they have even offered to let the NPSO purchase it!

Of course, our organization is not in the land-buying business, but even if we were, it would not be appropriate for this property to pass out of public ownership. According to the Federal Land Policy and Management Act of 1976, tracts of public land are NOT suitable for sale if that sale is outweighed by public objectives and values. The presence of a viable population of Nelson's checker mallow clearly makes this property valuable to the public.

In addition, because of the presence of a Federal Candidate Endangered species (the S. nelsoniana), any action dealing with this property must go to the Fish and Wildlife Service for consultation. The BLM knows that such action is their duty, yet they wrote offering to sell the property to NPSO!

I have written to Mr. Mears at the Salem BLM reminding him of the points above and suggesting further that the presence of Nelson's checker-mallow on the Monroe parcel indicates that it may quality as an ACEC (Area of Critical Environmental Concern).

I urge NPSO members to write to William Leavell, State Director, BLM, P.O. Box 2965, Portland, Or 97208 and urge him to push for ACEC status for the Monroe parcel. Please refer to the property with the following notation: Lot 5, Sec. 6, T 15S, R 5W, Will. Mer., Oregon. Please send copies of your letters to Senators Hatfield and Packwood.

Thanks for your help.

Flowers Forever,
Rhoda Love, President

AUDUBON JOINS OREGON FOREST WILDERNESS LAWSUIT

The National Audubon Society and six of its Oregon chapters are seeking to join a lawsuit to halt the development of national forest wildlands in Oregon until the federal government complies with the law. The suit contends that the Forest Service must prepare an adequate Environmental Impact Statement as required by the National Environmental Policy Act. The suit which affects approximately 3 million acres of national forest lands was filed last December by the Oregon Natural Resources Council and is awaiting action in U. S. District Court.

"By taking this action, Audubon is showing its strong commitment to the preservation of Oregon forest wilderness," said Daniel Taylor, Regional Representative of the National Audubon Society in Sacramento. "The Forest Service cannot be allowed to continue violating the law."

The suit contends that the agency has failed to adequately evaluate the roadless areas for their possible classification as Congressionally-designated Wilderness. The Forest Service completed its "RARE II" (second Roadless Area Review and Evaluation) process in 1979. The agency recommended only 400,000 out of the 3 million acres it considered for Wilderness designation. Since that time, the Forest Service has constructed roads, offered timber sales, and allowed other developmental activities on those lands.

The Forest Service has recently decided to prohibit new development in RARE II areas for two years. "The ONRC-Audubon suit seeks judicial affirmation of this new agency policy and also seeks to void existing timber sales contracts -- something the Forest Service is refusing to do," said Taylor.

Congress is considering legislation to resolve this issue. The Senate Energy and Natural Resources Committee is expected to begin consideration of the House-passed HR 1149 in late February. That bill would affect the 3 million acres in RARE II by designating approximately 1.2 million acres as Wilderness and releasing the remaining 1.8 million acres from existing legal requirements regarding wilderness review.

"Audubon has identified 3.4 million acres that deserve Wilderness designation out of the remaining 4.5 million acres of de facto federal forest wilderness lands," said Lynn Herring of the Portland Audubon Society. "This lawsuit provides a mechanism that will prevent any further decline in Oregon's wild forest habitat base until Congress can decide exactly which areas to protect."

The National Audubon Society has over one-half million members nationally, including 10,000 in Oregon. The Oregon Audubon chapters joining the suit are as follows: Central Oregon, Lane County, Portland, Rogue Valley, Salem, and Umpqua Valley.

FOR MORE INFORMATION:

Bill Butler, National Audubon Society, Washington, DC (202) 547-9009
Dan Taylor, National Audubon Society, Sacramento, CA (916) 481-5332
Jim Anderson, Central Oregon Audubon Society, Bend OR 388-1659
Dick Lamster, Lane County Audubon Society, Eugene, OR 343-1322
Lynn Herring, Portland Audubon Society, Portland OR 635-8030
Tom Wickland, Rogue Valley Audubon Society, Medford OR 772-5047
Margaret Hiatt, Salem Audubon Society, Salem, OR 838-2781
Jim Arneson, Umpqua Valley Audubon Society, Roseburg, OR 673-8075

Letters:

January 11, 1984

From: Jean Durning

As you may know, The Wilderness Society is putting on two workshops for conservationists about Bureau of Land Management planning and wilderness in late March. We invite your organizations to join us as co-sponsors. A few of you have agreed orally to co-sponsor the workshops, and we ask you to confirm that agreement -- a postcard would be fine.

Co-sponsorship means you will be listed as such on the program and hopefully that you will publicize the events among your own members. It does not require any funds. We welcome, but do not require, your suggestions on speakers or topics for the panels -- though these should be submitted soon since decisions must be made shortly. Most of you were co-sponsors of The Wilderness Society's workshops on Forest Planning a year ago in Portland and Eugene. These BLM workshops will be somewhat similar.

Don Tryon has agreed to act as local coordinator for the two workshops and either he or I will be happy to talk with you about them. My phone and address are: Northwest Region, 1424 Fourth Avenue, Room 822, Seattle, Washington 98101, (206) 624-6430. Mr. Tryon can be reached at 447-3508 or by mail, P.O. Box 85, Powell Butte, Oregon 97753.

The Salem workshop will take place the evening of March 29 from 7 to 10 at Willamette University. The Bend workshop will be all day Saturday, March 31, at Central Oregon Community College. The registration fee will be nominal. A field trip to a BLM Wilderness Study Area will be offered Sunday, April 1, weather permitting. We will send more information as planning proceeds.

NPSO has agreed to co-sponsor the workshops.

The Hunter Arboretum & Botanic Garden

In 1978 the city of Dallas and the Park District dedicated an undeveloped tract of land of about 5 acres at the south end of the city park as an arboretum of native Oregon plants, in honor of Delbert Hunter, a Park Board member since its inception and its chairman for the past 29 years. Major trails were laid out and an irrigation system partially installed, but development has been hampered by lack of labor and funds.

Last April a group of interested persons established the Friends of the Delbert Hunter Arboretum and Botanic Garden, a nonprofit, tax exempt organization, which assumed the responsibility of planning and maintaining the Arboretum as well as developing its potential as a resource for education and recreation in the community.

The area is a former rocky flood plain now overgrown with relatively few species of native woody plants. These include ash (Fraxinus latifolia) bigleaf maple (Acer macrophylla), snowberry (Symphoricarpus albus), cottonwood (Populus deltoides) and Clematis ligusticifolia, whose rampant growth enshrouds hundreds of square yards of shrubs and trees. Clearing areas of unwanted growth and corrective thinning and pruning continue to require much hand labor. Since the creek has been diked within in recent time, very few native wildflowers have had an opportunity to become established.

Volunteers have removed tons of rocks and boulders, wheelbarrow by wheelbarrowfull, and added hundreds of wheelbarrow loads of rotted leaves to the entrance garden where native Rhododendron and other ericaceous plants will be displayed. A huge mound of gravelly soil, dredged from the creek bed years ago, has been recontoured and is being planted with Oregon high desert plants. A low area will be made suitable for wetland plants. The steep bank near the entrance has been secured with logs and the soil improved. It will display species suitable for use as ground covers in the home garden and for a rock garden of native mountain plants. Areas designated for a collection of conifers and for an oak collection will be planted with the more common grassland wildflowers which will bloom and multiply while the trees are growing to maturity. Brodiea spp., Erythronium spp., Calochortus tolmiei, Sidalcea campestris, Iris tenax and others are being grown from seed by members, as are species of plants for the high desert and the mountain exhibits. Rescued from an extensive blanket of English ivy, a shallow wooded ravine, once a flume for a lumber mill, provides an ideal environment for ferns, vine maple, dogwood and woodland wildflowers.

The Arboretum has been staked out and mapped on a 50-foot square grid system. This is being used for landscaping and for recording the location of plant materials. A fund for the improvement of trails to accommodate the handicapped has been established. Durable labels and information signs are being designed with a hope that they may outwit vandalism.

The Arboretum is vulnerable to the problems common to most such publicly supported properties; however, its location, adjacent to an attractive, well-maintained and much used city park in a residential area, increases the potential for usefulness to the community. School classes will find it convenient for field trips and educational uses. Leaders of youth groups have already expressed a need for such a resource in the field of natural history. Classes in gardening with native plants, ecology and conservation, and identification of wildflowers, trees, etc., will be offered to members and to the community. For many persons this may be the only opportunity to see even the most common of native plants. More unusual wildflowers will be introduced when the environmental site and public use indicate that there will be enough protection to allow them to flourish.

Our small Arboretum is dedicated to the enjoyment and the enlightenment of the people. One of the devoted volunteers recently remarked, "While I am planting these wildflowers, I can hear delighted older persons exclaiming, 'I remember these from childhood days when they grew everywhere in the valley'."

Viola Sobolik
Willamette Valley Chapter

Welcome, New Members

CORVALLIS CHAPTER
- Beth Russell
- Joan B. Glascock
- Renee Roufs
- Ed Fredrickson

EMERALD CHAPTER
- Janell Sorensen
- Gail Baker & Clay Gautier
- Martin D. Snorb
- Paula Hartz

HIGH DESERT CHAPTER
- Denise Harvey
- Victoria Churchill

MID-COLUMBIA CHAPTER
- Dave Gross

PORTLAND CHAPTER
- Angela G. Evenden
- Norma M. Alberthal
- Iverna L. Velene

SISKIYOU CHAPTER
- Jean Danielson
- Frederick Shepard
- Anna M. Hill

PLANT FAMILY PROFILES by Herm Fitz

SALICACEÆ: Willow Family

The Willow Family is a small family of trees and shrubs (perhaps 350 species) especially common in north temperate regions, but with a few representatives from the tropics to the southern hemisphere. Two genera of the four in this family are well known in North America: the willows (*Salix*) and the poplars, cottonwoods, and aspens (*Populus*) The lesser known genera, with very few species, are of northeast Asia and are not universally recognized: *Chosenia* and *Toisusu*.

Female flower of Black Cottonwood greatly enlarged. Note the cuplike structure at the base of the flower and the tri-carpellate condition.

The willows are mostly shrubs or small trees, often scrub or marginal species, seldom ecologically dominant, but particularly common in wet places. Most *Populus* species are tall trees and some are dominant in their own communities. Perhaps five species of *Populus* and 40-50 species of *Salix* occur in Oregon.

In this family, leaves are simple, with stipules, alternate on the stem, and deciduous, tending to be narrow in *Salix* and broader in *Populus*. The unisexual flowers are borne in catkins which may appear before, after, or at the same time as the leaves. The plants are dioecious; that is, catkins of male flowers (stamens only) are borne on one plant while catkins of female flowers (pistils only) are borne on a separate plant. A catkin consists of many flowers along an axis, each subtended by a small bract. There are no sepals or petals. The male flower consists of 2-30 free or united stamens (rarely one in *Salix sitchensis*); a female flower consists of a single bicarpellate or tricarpellate unilocular, superior ovary with numerous ovules on parietal or basal placentation. The style may be short or long and is often divided into 2 or 4 stigmas.

Catkins of *Populus* are scentless and pendant, dangling in breezes which effect pollination. There are no nectaries; instead a disc or cup-shaped structure occurs at the base of each flower (perhaps a vestigal calyx). Catkins of *salix* are rigid and have one or two small glands at the base of each flower secreting a sweetly-scented nectar which attracts the insects that effect pollination.

Single pistillate flower

Single staminate flower

Pistillate catkin (female)

Staminate catkin (male)

Sexual parts of Sitka Willow (*Salix sitchensis*)

The fruits of all species are tiny 2-4 valved capsules bearing numerous hairy seeds that are dispersed easily in the wind.

Several problems encountered in the identification of Salicaceae make this a "problem" group. First, hybrids readily occur in both *Salix* and *Populus* (and in Japan a hybrid between *Chosenia* and *Toisusu* is reported!). Thus the plant in your hand may not be a unique species. The nature of the key is another problem - it may ask you to consider characteristics of the female when you have a male, or visa versa. Often it asks you to consider both sexes, so you'll need to match them up beforehand! It may ask about the pubescence of young leaves and older leaves at the same time. Or it may

A branch of Black Cottonwood (*Populus trichocarpa*) showing female catkin, developing leaves, bud with bud scales, and leaf scars from previous year.

ask you whether the catkins appeared before, with, or after the leaves, sometimes difficult to tell later in the season (unless, of course, the catkins are at the tips of leafy shoots of the season).

The relationship of Salicaceae is poorly understood. Early systematists considered it related to other catkin-bearing groups such as the Birch (Betulaceae), Beech (Fagaceae) and Walnut (Juglandaceae) families. It appears, however, that the simplicity of the flowers represents an advanced reduction of flowers formerly more elaborate rather than a primitive condition. Various authors have noted different affinities with other groups, but the family, alone in its own order, appears to have no close relationship with any other order of living dicots.

With all this in mind, we may write the generalized floral formula:

for the male flower $Ca^0\ Co^0\ S^{(1)2-30}\ P^0$

for the female flower $Ca^0\ Co^0\ S^0\ P^{(2)-(3)}$

You have probably been familiar with members of this family for a long time, for they produce those welcome harbingers of spring - the "pussy-willows." Perhaps now you may better understand the difficulties in identifying individual members of the Salicaceae - the Willow Family.

Jean Davis Award: Deadline 4/1

NPSO will award a scholarship to a worthy student in an Oregon college, with his or her major study in plant systematics or plant ecology. The scholarship is in the amount of $1,000, and is to be used toward the student's tuition within the following academic year. Deadline for applications is April 1, 1984; the award will be made by May 1, 1984.

Donations to the scholarship fund are tax deductible and are welcome at any time. All interest earned from the donations is apportioned out to as many scholarships as possible in the spring of each year, at $1,000 each.

All communication regarding this fund should be addressed to Mary Falconer, Committee chairman, 1920 Engel Ave. NW, Salem, OR 97304.

* * Rules for Scholarship Awards * *

1) Scholarships are available to students in Oregon colleges, planning their major study in Plant systematics or ecology.
2) Scholarships are awarded in the amount of $1,000 to worthy students who will complete at least 2 years of satisfactory college work by July 1 of the year of receipt of application, & are full time students. Graduate students may be eligible if they meet all qualifications except that of "full time student".
3) Awards are made in the following manner:
   a) a certificate presented to the recipient
   b) a check in the amount of the award, submitted to the school of choice, as set forth in rule 1, to be used toward tuition within the following academic year
4) If an award recipient fails to enroll, changes his or her major, or leaves the school before completing the period for which the award was granted, the full amount or unused part of the money shall be returned to the Jean Davis Memorial Scholarship Fund.
5) Applicants are required to submit:
   a) in their own handwriting, a statement of academic & career intent
   b) two letters of reference from persons able to judge to student's ability to successfully complete study in the area of plant systematics or plant ecology
6) All applications together with items listed in rule 5 must be received by the Chairman of the Jean Davis Memorial Fund Committee no later than April 1. The award will be made by May 1.
7) Scholarships are not granted to members or relatives of any person currently serving on the Scholarship Committee.

Giants revisited

On 16 October 1983, a group of nine from the Emerald Chapter visited the obscure and remote Bureau of Land Management Outstanding Natural Area, The Valley of the Giants. It is located on the North Fork of the Siletz River near the confluence of Warnick and Carter Creeks, around 27 miles west of Fall City. As you drive the miles of winding gravel road, usually muddy from the area's 200+ annual inches of rain, you wonder if you are not in the guts of the Coast Range, rather than the heart.

We stopped at the first falls on the North Fork of the Siletz hoping to see some summer steelhead lying in the deep plunge pool. The rock underlying the river is a pillow basalt that cooled while the rocks that became the Coast Range were still at the bottom of the ocean, according to Harold Dunn. Harold also identified white starburst crystals in the basalt as natrolite, a kind of zeolite. Weeks later, while still carrying a piece of this stuff around, I met at a Halloween party a celestial nymph: Ellen King, a graduate student at the University of Oregon. She said the habit of the crystals--small fibrous radiating needles, appearing to fill a pocket in the rock--is characteristic of natrolite.

The Valley of the Giants would be difficult to locate without a tour guide. The only sign we saw was a hand lettered felt-tip plywood sign at the junction of the North and South Fork roads, and the sign was covered by a BLM Timber Sale notice. At the site there was no sign to indicate that we were at the Valley of the Giants ONA. Nonetheless, armed with a species list provided by the Willamette Valley Chapter (See Sept. 83 Bulletin), we charged down the old skid road. It shortly turned into a trail, tunneling through a dense salmonberry thicket and emerging into Devil's Club (Oplopanax horridum), a formidably armed araliad which can rip the clothes right off your body. There is a footbridge over the North Fork of the Siletz, constructed from a single mighty tree, proudly felled by the Bureau of Land Management. The stump is maybe 5-6 feet across, and probably dates back to 1615 A.D., as indicated in BLM literature. We followed the trail through this fine 47 acre stand of old growth Douglas Fir and Western Hemlock, seeing many recent blowdowns, probably from the November storm of 1981, including one enormous tree that may have been the world-renowned "Big Guy". After following this trail for an hour or so we were quite surprised to find ourselves back at the footbridge. The BLM map did not show the trail to be a loop.

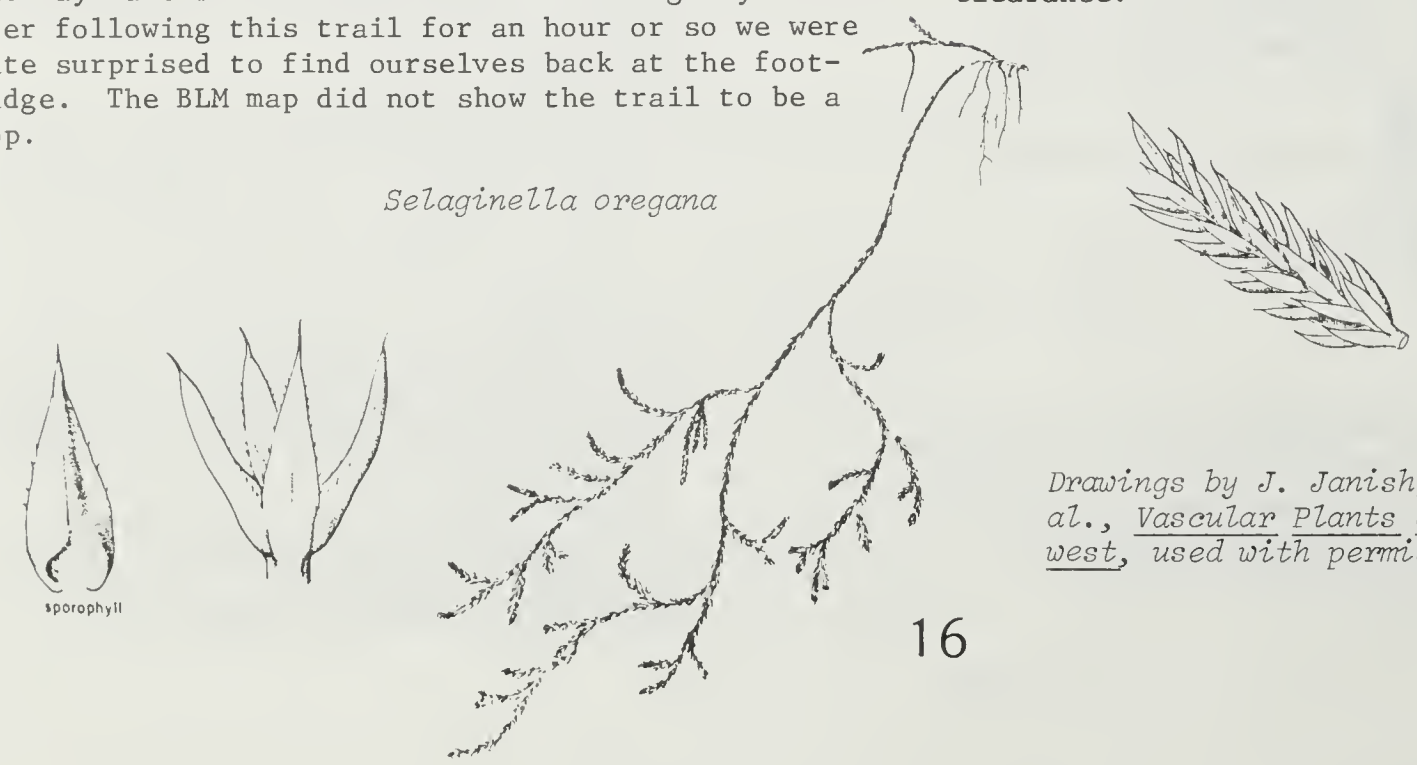
We found the Willamette Valley Chapter species list to be quite complete, but few of the higher plants were in bloom. In the future, pilgrims should be on the lookout for a couple of Rare, Threatened and Endangered plants reported from the Siletz River area: Queen of the Forest (Filipendula occidentalis) and loose-flowered blue grass (Poa laxiflora). The mushroom season appeared to be just beginning. Along the skid road, there were many small bright orange milky caps (Lactarius deliciosus)---edible, but of poor quality. Some of the other mushrooms I was able to identify (with the help of Freeman Rowe) were: Boletus zelleri, a medium sized bolete with a red stem and dark velvety cap; Russula xerampelina, breaking like chalk and smelling like seafood; Inocybe geophylla, pure white and full of muscarine; Inocybe fastigiata, brown and smelling like green corn; Amanita vaginata, not poisonous, but to be avoided. Deep in the woods, I made a nice collection of Phaeocollybia kaufmanii, a stout conic mushroom with a queer tap-root like stem; it survived for display at the Mt. Pisgah Arboretum Mushroom Show.

On the return trip to Eugene, one intrepid group elected to follow the Siletz downstream through the gorge to Logsdon. Though this area was heavily clearcut earlier in this century, the steepness of the canyon walls and general rugged beauty has been little diminished. In spite of past logging abuses, the Siletz still sustains vigorous native runs of anadromous fish. Summer steelhead enter the river as early as June, but are most willing to accept flies after the first late summer/fall freshets. I recommend a sparsely dressed muddler carefully fished with an 8-weight double taper floating line. Our last official stop was near the old logging camp, on the trail that leads to a steelhead spot dubbed "Charcoal Broil", there we fondled the luxuriant growths of Selaginella oregana hanging from the trees.

If you are planning to visit the Valley of the Giants Outstanding Natural Area, you get maps and a species list from Larry Scofield, Botany Office, Salem district BLM, 177 Fabry Road SE, P.O. Box 3227, Salem OR 97302 phone 399-5630. The Siuslaw National Forest map shows most of the roads in the area; there are several alternate routes to the area. The Valsetz Quadrangle covers the upper Siletz Valley of the Giants area, while the Euchre Mt. Quad. covers the lower gorge area. The roads are rough, but can be driven in a standard passenger car with moderate clearance.

Leighton Ho
Emerald Chapter

Selaginella oregana

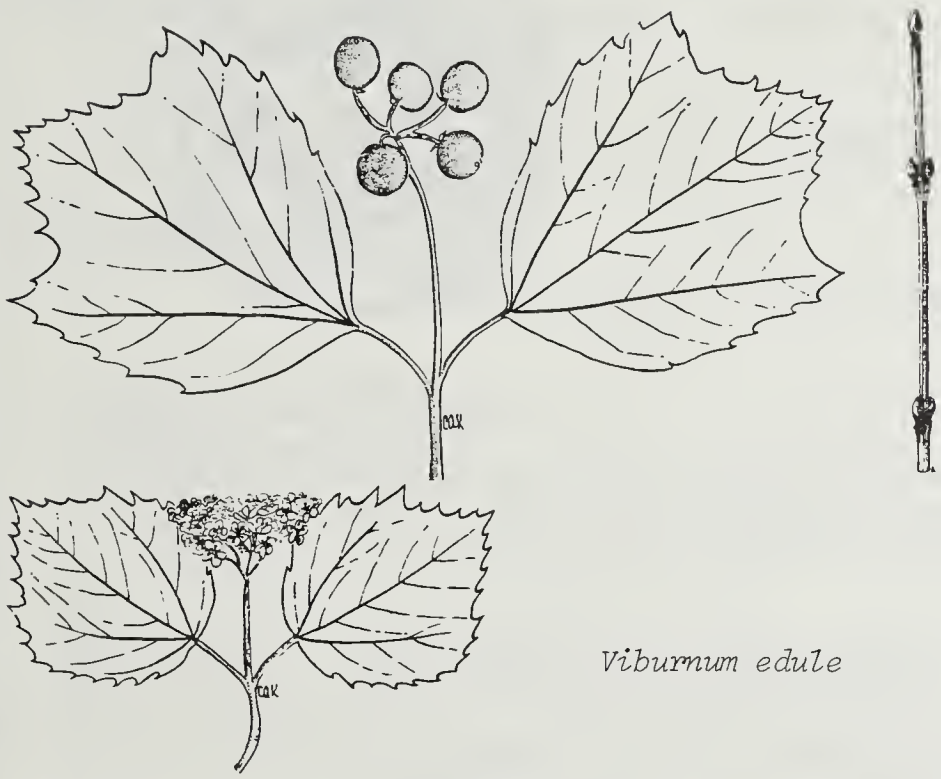


Drawings by J. Janish, from Hitchcock et al., Vascular Plants of the Pacific Northwest, used with permission of the publisher

Oops

Alan Curtis of the Emerald Chapter has pointed out that the *Pyrus fusca* drawing in last month's Bulletin (p. 15) is not *Pyrus fusca* at all, but rather is *Viburnum edule*. These drawings, from Alaska Trees & Shrubs, USDA Handbook No. 40, illustrate the differences between the two species.

For his alertness, Alan will receive the original drawing of ~~*Pyrus fusca*~~ *Viburnum edule*.



Viburnum edule

Pyrus fusca
(= Malus diversifolia)

>>>

The Editor
Native Plant Society of Oregon
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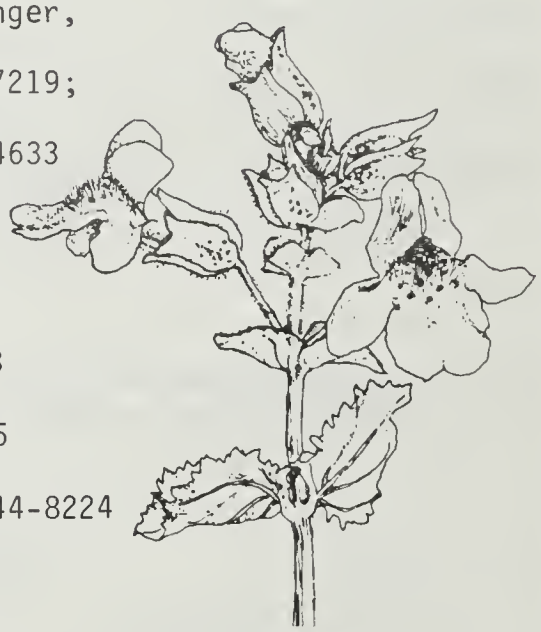

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THE NPSO BULLETIN is published monthly by the Native Plant Society of Oregon, incorporated under the laws of the state of Oregon. You are invited to join. Membership includes a subscription to the BULLETIN.

Send membership applications from the foregoing page or provided by Chapter presidents to:
Mary Falconer, Membership Chair: 1920 Engel Ave. NW, Salem, OR 97304

Send change of address (include old address & zip) to:
Mary Falconer, Membership Chair (address above)

Send BULLETIN copy to the editor by the 10th of the month (editor's address listed above).

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no. 4

Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 4 April 1984

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CHAPTER NEWS

Blue Mountain

--- No scheduled meetings or field trips for April.

Corvallis

9 Apr., Mon. Meeting, 7:30 p.m., Cordley Hall Rm. 2087, Oregon State Univ., Corvallis. BOTANIZING IN DOMINICA by Dr. Ken Chambers. After sampling the flora & ecology of this Caribbean island, we will discuss the Rare & Endangered plant program in our local area. Salem & Eugene members are urged to attend.

14 Apr., Sat. Field trip; SPRING FLOWERS OF MCDONALD FOREST, a short hike just N of Corvallis. Contact Esther McEvoy for more information, at 754-0893.

12 May, Sat. Field trip; FLORA OF THE SAND DUNES, a day trip to Newport to assist the Marine Science Center in developing a plant list for the sand dunes. Contact Esther McEvoy, 754-0893.

14 May, Mon. Meeting, 7:30 p.m., Cordley Hall. Tentative subject: WILDFLOWERS OF THE CENTRAL WESTERN CASCADES. Elections will also be held at this meeting, so a good turnout is important!

19 May, Sat. Field trip. This is a joint venture with the Emerald Chapter; day trip to LIMPY ROCK RESEARCH NATURAL AREA via the scenic Bohemia Mts. Meet in Cottage Grove at the Village Green at 8:30 a.m. From there we will travel up Sharps Creek, then down Canton Creek to the N Umpqua R. At Limpy Rock we will help map the population of Sarcodes sanguinea (snow plant) & see other special interest plants. Contacts: Corvallis-Dan Luoma, ph. 758-8063; Emerald-Alan Curtis, ph. 345-2571.

2 June, Sat. Field trip to PROPOSED MIDDLE SANTIAM WILDERNESS for those who cannot make the Annual Meeting. Contact: Brian Heath, 752-6127.

14 July, Sat. Field trip to wildflower meadows in the PROPOSED OLD CASCADES WILDERNESS. Contact: Brian Heath, 752-6127.

Emerald

ANNOUNCEMENTS:
1) ***NEW MEETING LOCATION*** The Red Cross Bldg. is no longer available to us. Our April meeting will be in Rm. 30 in the basement of Science I on the University of Oregon campus.
2) Membership interest questionnaires: please bring them to the April meeting if you haven't already mailed them in. We will also be collecting ballots for the state election that were included in the March Bulletin.
3) If you have any ideas, plants, photographs, etc. for our display at the Garden Club show at Valley River Center Apr. 7-8, come to the April meeting or contact Leighton Ho.

2 Apr., Mon. Meeting, 7:15 p.m., Rm. 30, Basement of Science I, U of O. THE BERRY BOTANIC GARDEN SEED BANK FOR OREGON RARE & ENDANGERED PLANTS will be explained by Julie Kierstead, Seed Bank Director.

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18 Apr., Wed.	First meeting of Rhoda Love's WILDFLOWER IDENTIFICATION class, offered through the Amazon Community Center. This field course will feature 7 weekly field trips to natural areas in & around Eugene. The class meets 9 a.m. to noon, each Wed. from Apr. 18 to May 30. Registration fee is $18, and the class is limited to 12 people; contact the Amazon Community Center to register.
5 May, Sat.	Field trip to MT. NEBO, MCKENZIE RIVER DRAINAGE, led by Alan Curtis (345-2571). Meet at 9 a.m. in the South Eugene High School parking lot at 19th & Patterson.
5 May, Sat.	Field trip, MCKENZIE RIVER TRAIL, led by Ken Lodewick (344-6533); a joint Obsidians trip. Sign up at the YMCA.
19 May, Sat.	LIMPY ROCK RESEARCH NATURAL AREA field trip, to view the mysterious monotropoids; a joint trip with the Corvallis Chapter, led by Dan Luoma. Meet 8 a.m. at SEHS parking lot.
20 May, Sun.	MT. PISGAH ARBORETUM WILDFLOWER SHOW.
26 May, Sat.	Field trip to SILVER CREEK FALLS, led by Ken Lodewick (344-6533); a joint venture with Obsidians. Sign up at YMCA.
27 May, Sun.	Field trip, EIGHT DOLLAR MOUNTAIN, led by Frank Lang of SOSC & Siskiyou Chapter. Members of other chapters are invited to join us, but please fire some warning shots if you are leading a large contingent (Leighton Ho, 345-3252). We will rendezvous with Frank at 9 a.m. at the Selma Store on Highway 199. Carpooling & camping arrangements will be discussed at the May meeting.

High Desert

12 May, Sat.	Field trip to THE DEVIL'S GARDEN, a Wilderness Study Area about 40 mi. E of LaPine. Meet at 8:30 a.m. in back of McDonald's in parking lot in Bend. The road has been negotiated by passenger car, but a pickup or 4WD might be preferable. Wear boots suitable for lava-walking.

Mid-Columbia

4 Apr., Wed.	Meeting, 7:30 p.m., Mosier School.
15 Apr., Sun.	Mid-Columbia Chapter 8th Annual FLOWER SHOW, in conjunction with the Blossom Day Smorgasbord at the Mosier School. Come see our flowers & enjoy the good food. Hours for the show are 9 to 5 on Sunday. We will be in a state of chaos on Saturday, but interested people will be welcome after 2:00 p.m.

Portland

7 April, Sat.	Field trip; MOSIER at the best season, always new as well as familiar sites to inspect. Meet at 8:00 a.m. at K-Mart, NE 122nd & Sandy Blvd., S end of parking lot (exit I-84 northbound at 122nd). Continuing, off I-84 about 60 mi. E at Mosier, for a drive-&-stop day with our leader, Keith Chamberlain.
10 Apr., Tues.	Meeting, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson, Portland. Celeste & Vern Holloway will present a program of slides & discussion of ENDANGERED SPECIES AND A CONSERVATION ETHIC, exploring Oregon & world-wide problems of diminishing flora & fauna, as well as an examination of the conventional justifications for attempting to slow this loss of biological diversity.
14 Apr., Sat.	Field trip; SANDY RIVER GORGE, in the Nature Conservancy's splendid preserve so near to Portland. About 3 mi. of hiking, so here's a leisurely day for botanizing & lunching beside the river. Meet at 10:00 a.m. in Troutdale at the bus turn-around. Leader, Katherine Snouffer.
21 Apr., Sat.	Field trip; RIDGEFIELD WILDLIFE REFUGE. Diversity of flowers may surprise you, if this is your first visit to the Carty Unit. Meet at 9:00 a.m. at Park & Ride lot on Wash. Hwy. 14 about 1 mi. E of I-5 bridge to join leaders Mike & Nancy Fahey.
28 Apr., Sat.	Field trip; A DAY IN WASCO COUNTY with two members who live there & will take us high or low as weather dictates. Leave the K-Mart lot (see above) at 7:30 a.m. It's 110 mi. via The Dalles to rodeo grounds at Tygh Valley and our leaders, Jane Hallgarth & Virginia Winegar.
5 May, Sat. 6 May, Sun.	No field trip. Let's all be involved in our great display of native plants this weekend at OMSI!

Siskiyou

12 Apr., Thurs. Meeting, 7:30 p.m., Rm. 171, Science Bldg., Southern Oregon State College. A TREK IN NEPAL; Doug Henry will share his trek through the Khumbu region of Nepal to the Everest Base Camp. A look at the people, their culture & dramatic country, & the limiting natural resources.

10 May, Thurs. Meeting. Jimmy Kagan of the Oregon Natural Heritage Data Base, The Nature Conservancy, will give a program on IDENTIFYING & PRESERVING CRITICAL HABITAT IN SOUTHWEST OREGON.

Willamette Valley

16 Apr., Mon. Meeting, 7:30 p.m., First United Methodist Church, Carrier Room, corner of State & Church Sts., Salem; use the Church St. entrance. The meeting topic will be PLANTS IN HIGH PLACES, Part III of the Biological Potpourri, by member Vi Sobolik.

21 Apr., Sat. Field trip; MILL CREEK, led by Dr. Morris Johnson. We will car pool at 8:00 a.m. at the South Salem K-Mart or meet at the junction of Highways 223 & 22. Telephone Clint Urey, 743-2802, for additional details.

TRYON CREEK TRILLIUM FESTIVAL

Time to start, or refurbish, your native plant garden at the annual sale at Tryon Creek State Park. It's scheduled for April 14 & 15, from 11:00 a.m. to 4:00 p.m. on both days.

Stan Jewett once again provides the plants. Besides orders for Trilliums, there will be a ready selection of conifers, ferns, fragrant western azalea (Rhododendron occidentale), vine maple (Acer circinatum), Sitka Mountain Ash (Sorbus sitchensis), flowering red currant (Ribes sanguineum), small cascara (Rhamnus purshiana), mountain & evergreen huckleberry (Vaccinium spp.), violets, iris, & Erythronium, for starters.

Other events are planned to appeal to a variety of interests: a SLIDE SHOW will be provided both days at 11:00 a.m. by the Photo Club. THE ZOO'S ROAD SHOW--with gopher snakes & oppossums--will be on view both days from around noon to 2:00 p.m.
Saturday, April 14th at 10:00 a.m., JUNE FLEMING will hold a workshop for families who hike & backpack on STAYING FOUND. At 1:00 p.m. on that day, CAL BURT will talk about EDIBLE PLANTS.
Sunday, April 15th, at 2:00 p.m., ELIZABETH HORN, author of Wildflowers I (which covers plants of the Cascades, Canada to California, & Wildflowers II (on the Pacific Coast) will show her excellent slides as she talks about OREGON WILDFLOWERS.

Two weeks earlier, on Sunday, April 1 at 2:00 p.m., DAVID CAVAGNARO will be speaking & showing slides to illustrate his talk on THE EVOLUTION OF PLANTS, from the simple, spore-bearing plants to the complex species which have evolved. He is a noted photographer as well, so it should be special.

TO YOU WHO RENEW

Please note: Mary Falconer, state Membership Chair, needs both copies of the membership form. The yellow copy is for her files, and the white copy circulates to the editor of the Bulletin, the collating & mailing people, and the keeper of our computer address directory. Chapter Presidents, please make this clear to your chapter members who ask you for membership forms.

OUR TYPE OF PERSON

Readers of the Bulletin may notice that the type varies from article to article. Part of the reason for this is that much of the monthly typing chore is now handled by Mary Jane Fredericks of the Portland chapter, who has graciously volunteered her skill & her typewriter to expedite the production of the Bulletin. Thank you, Mary Jane.

JRK

3RD WILD OREGON AUCTION

Sat., May 12, the Third Wild Oregon Auction will be held in Studio One of the Holt Center for Performing Arts. The auction is a benefit for the Oregon Natural Resources Council. Auction preview & entertainment are from noon to 1:00 p.m., silent auction from noon to 3:00 p.m., & oral auction from 1:00 to 5:00 p.m. For more information contact ONRC, 1161 Lincoln St., Eugene 97401, 344-0675.

* * * *

REPLY TO AN EX-HAYBALER

In his article, "Requiem for a Haybaler: Throwing in (out) the Trowel" (NPSO Bulletin, Oct., 1983), a former member of our Society from Pendleton describes his personal metamorphosis from an avid and careless collector of native plants to a conservationist who now picks only weeds. I laud him for his change of attitude. However, I cannot allow to go unchallenged his assertion that the Native Plant Society of Oregon is a group of trowel-happy collectors.

The author of "Trowel" mentions specificially a state meeting of the NPSO at the Malheur Field Station. With respect to a field trip which took place in conjunction with that meeting he comments "...I remember well the faces behind the presses and the plastic bags..." As a participant on that field trip, I will not let that image go uncorrected. On that trip around Steens Mountain, as my photographs clearly show, we were all much too busy with handlenses, notebooks, identification manuals, cameras, binoculars, rulers, pencils, etc. to have carried or used presses, plastic bags...or trowels! I will admit to observing one collection. Joan Cook picked up an old garbage can lid from beside the road. It now serves as a birdbath in her Eugene garden!

In fact, not only do NPSOers not collect for personal use, but our charter clearly states our purpose: "To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest." (Italics added.)

The Guidelines and Ethical code of the Native Plant Society of Oregon, adopted in 1978 and reiterated each field season, clearly state: (Art. II, #2) "On group outings (field trips, conservation activities, class field studies), group leaders must take responsibility for protecting native plants from the activities of the group. All participants should understand the goal of plant protection, the purpose of the outing, and the means by which they can make the least impact on plants and the natural habitat."

And (Art. II, #7) "Collecting should be considered only when identification cannot be made in the field or when it will contribute significantly to educational or scientific objectives."

The Native Plant Society of Oregon has always been and will continue to be a leader in the protection of Oregon's natural environment. In just the two years that I have been the state president, we have amassed an impressive list of successes in the conservation field. Here are a few

Viola glabella Nutt.

Drawings by Esther H. Gruber

examples chosen from many:

--The NPSO has established a strong state-wide group which is preparing to sponsor and introduce an Oregon Endangered Species Act to the 1985 state Legislature.

--The NPSO Rare and Endangered Plant Committee Chairman, Jean Siddall and her Rare Plant Project have produced one of the most complete inventories of R&E plants in the United States. Jean's committee continues to monitor populations and habitats.

--Specific parcels of important Oregon habitat that have been saved from development in the past 2 years as a direct result of NPSO action are: Wren Prairie near Covallis, Willow Creek near Eugene, Waldo Lake in Lane County, Rainbow Falls in Lane County, and Rock Mesa in the Three Sisters Wilderness Area.

--At present the NPSO is deeply committed to the preservation of a number of important habitat areas including: Agate Desert near Medford, Eight-Dollar Mountain in the Siskiyous, the Waldo Country Wilderness Addition, the Columbia Gorge, and the Monroe Parcel in Benton County with a population of of the rare and endangered species, *Sidalcea nelsoniana*.

--At the local chapter level as well as at the state level NPSO members are fighting to halt the commercial exploitation of such native species as the cobra lily, *Darlingtonia californica*, and the fairy slipper orchid, *Calypso bulbosa*, and other species.

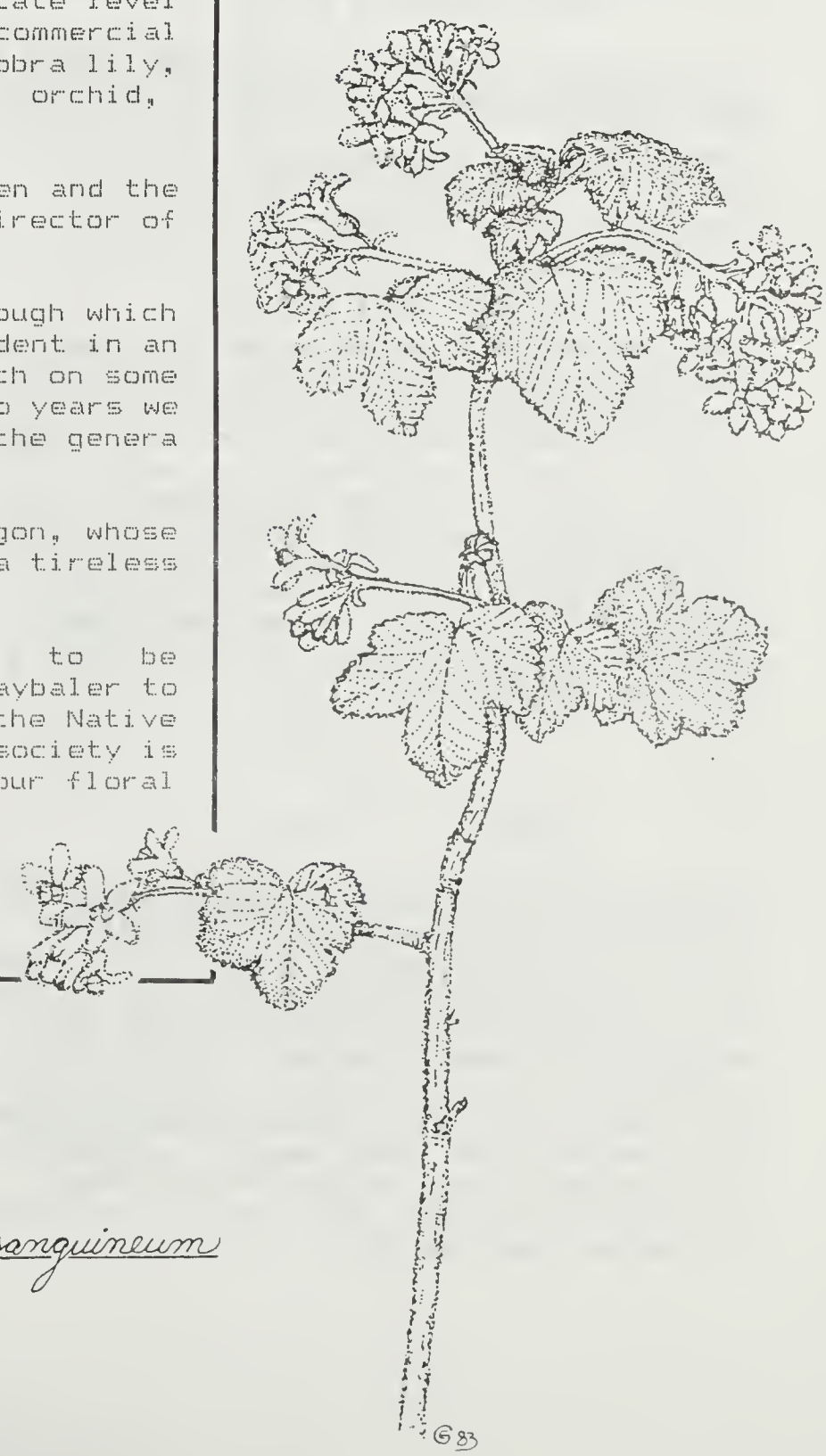
--The NPSO has close ties with the Berry Garden and the Leach Garden. The editor of our Bulletin is the director of the Berry Garden's cryogenic seed bank.

--We have a successful scholarship program through which we endow an annual scholarship of $1000 for a student in an Oregon college or university who is doing research on some member of the Oregon native flora. In the past two years we have thus suported important graduate research on the genera *Mimulus*, *Arabis*, and *Delphinium*.

In short, the Native Plant Society of Oregon, whose president I am very proud to be, is and has been a tireless champion of our Oregon flora.

Our former member from Pendleton is to be congratulated for his personal conversion from haybaler to plant protector, but I feel he owes an apology to the Native Plant Society of Oregon for suggesting that this society is anything but a staunch and unstinting defender of our floral heritage.

Dr. Rhoda M. Love, President



Ribes sanguineum

• ANNUAL MEETING UPDATE •

Are you procrastinating in registering for the NPSO Annual Meeting? Why wait? Sunriver, where the east slope of the Cascades meets the Oregon High Desert, is gorgeous; there will be lots to do and plenty to talk about; the food will be good and the field trips fun; in short, it will be a good time in a lovely setting, and you are bound to learn something. What else is there?
Register promptly for the field trip of your choice, using the registration form included in the March 1984 Bulletin. Don't forget, your arrangements for lodging must be handled separately: if you plan to stay at Sunriver, contact the Lodge Sales Dept., Sunriver, OR 97702, 1-800-452-6874. See the March Bulletin for details.

Saturday night's featured program will be "Grasslands of Central Oregon" by David Danley.

The banquet entree will be baron of beef. There will not be an alternative entree.

The videotape Rare Plants: Problems and Promise in the Willamette Valley will be shown at the Annual NPSO Meeting, 7:30 p.m. on Friday, June 1, in the Sunriver Lodge. (A complete description of the tape is in the September 1983 Bulletin.)

BLACK HILLS TRIP CANCELED

As Ginny Crosby will not be at the Annual Meeting (see note in this issue), she will not be able to lead a field trip to the Black Hills. Stu Garrett of the High Desert Chapter has graciously agreed to lead a trip to the Painted Hills instead. The Painted Hills are ca. 40 mi. E of Prineville, just W of Mitchell. Some plants which may be blooming then are *Pediocactus simpsonii, Chaenactis nevii, Lewisia rediviva, Cleome, Allium spp., & Lomatium hendersonii*. To register for this field trip, cross out Black Hills on the registration form & write in Painted Hills.

# # #

The Willamette Science and Technology Center (WISTEC) is initiating a series of Travelogue lecture-slide presentations. The material covered will be of a general nature but will include information on the natural history, botany and plant ecology in each area discussed.

The first presentation is on the Galapagos Islands, by biologist Gail A. Baker, April 3, at WISTEC, 2300 Centennial Blvd., Eugene. Cost is $2.00 general, $1.00 students, $.75 seniors. For further information, call 344-0312.

BY-LAWS REVISIONS

To the Membership:

When Mary Falconer and I drafted the by-laws for the Native Plant Society of Oregon, we dealt only with those concerns raised by Jim Conley, who was preparing our application to IRS for tax exempt status. We made no other changes. At its last meeting your State Board of Directors unanimously approved addition of the immediate past president of the Society to the membership of the Board of Directors, and your President has directed me to prepare the revision to Article VI and notice to the members as required by our by-laws. In addition, a needed clarification in Article III pointed out by Ken Chambers has been made.

Voting on these amendments will be conducted at the Annual Meeting in June.

Mariana Bornholdt

Proposed Amendments

Article III - Membership
Section 2. Right of Members to Vote
Each membership shall be entitled to one (1) vote on any question requiring a vote of the membership of the corporation, except for participants in family memberships. Each family membership shall be entitled to a maximum of two votes ~~each~~. The right to vote of a group member shall be exercised by an individual designated in writing as the official delegate for that group. (A group refers to any affiliated organization other than a chapter).

Article VI - Governing Body
Section 2. Board of Directors, Composition
The Board of Directors shall consist of the statewide officers of the Society, the immediate Past President, the Presidents of all affiliated chapters, the State Membership Chairman, the Editor of the Bulletin, plus six members elected by the general membership of the Society whose terms of office shall be two years. Three Directors-at-Large shall be elected each year.

WILDERNESS TRIPS IN SUNSET

I have now seen the proofs of the Sunset magazine article on Wilderness in the West. Thanks to our Chapter Presidents & Field Trip Chairpersons, NPSO will have at least fourteen trips listed in Sunset's May issue. I'm very gratified by the response of my Chapters and very proud of our organization. Have a wonderful time on your Wilderness outings, everyone, and remember to leave the wilderness as wild as you found it.

RL

DELPHINIUM GUIDE AVAILABLE

An illustrated key to some of the local Delphiniums in western Oregon and Washington (including several rare species) is available for $1.50. This key is a result of a study on these Delphiniums for a master's thesis at University of Oregon. It includes five full-page habit sketches of the species. Send $1.50 (to cover copying and mailing) to:

Gaylee Goodrich (503) 485-3453
2167 Augusta Street
Eugene, Oregon 97403

LEACH BOTANICAL PARK SPRING OFFERINGS

April 7 GARDENING THE YEAR ROUND. Presentation by author Binda Colebrook, 2-4 pm, $3.00

May 16 STREAMSIDE REHABILITATION. Mary Peterson, Field Representative, Oregon Natural Resources Council, will give a slide presentation followed by Q & A.

GRANDE RONDE RIVER. Slide presentation by Wayne Hufstutter, Native Plant Society of Oregon

This double presentation begins at 7:30 pm. No charge.

June 20 USING NATIVE SHRUBS IN YOUR YARD OR GARDEN. Presentation by Doris and Stanley Jewett, 7:30 pm, free.

Interested persons may call 761-9503 for more information. Leach Botanical Park is located at 6704 S.E. 122nd Avenue at Johnson Creek.

FEDERAL BULLETIN AVAILABLE

The *Endangered Species Technical Bulletin* is now available by paid subscription to persons not eligible to receive this publication regularly without charge. In partnership with the World Wildlife Fund-U.S., the Wildland Management Center at the Univ. of Michigan's School of Natural Resources will be reprinting & distributing the *Bulletin* (at cost) each month, along with a clearly distinguishable insert summarizing their activities. For each subscription of 12 monthly issues, send $12.00 by check or money order (payable to the Univ. of Michigan) to Endangered Species Technical Bulletin, Wildland Management Center, School of Natural Resources, Univ. of Michigan, Ann Arbor, Michigan 48109. Due to budgetary constraints, the Fish & Wildlife Service has to limit its free distribution of the *Bulletin* to Federal employees & official contacts of the Endangered Species Program.

FLOWERS FOR EASTER

Do you have a friend who is tired of hard-boiled eggs for Easter? Send his or her address & your check for $3.00 to us, and we will mail a packet of R/E cards & put your name & address on the return space. You will be publicizing the protection needs of rare & endangered wildflowers as well as doing something thoughtful for your friend.

($3.00 ea.) Charlene Holzwarth
2524 NE 34th Ave.
Portland, OR 97212

WILDFLOWERS OF THE UNITED STATES BOOKS AVAILABLE

A valuable source of information on the wildflowers of the United States that is scientifically accurate yet easily understandable to amateurs and the lay public!

Each volume contains
- over 1000 color illustrations
- an introduction to the identification of wildflowers
- an illustrated glossary of basic botanical terms
- vernacular and scientific names, descriptions and flowering times of the plants treated
- index

Originally published by McGraw-Hill Book Co., these newly clothbound books are available (May 1984) from New York Botanic Garden at the following reduced prices:*

Vol.	Contents & Publication Date	Current Sale Price	Our Price*
1	Northeastern States (1966)	$ 69.50	$ 54.00
2	Southeastern States (1967)	105.50	74.00
3	Texas (1969)		O/P
4	Southwestern States (1970)	105.50	81.00
5	Northwestern States (1971)	96.95	74.00
6	Central Mts. & Plains (1973)	103.50	81.00
	Index (1975)	39.95	27.00
	TOTAL:	$520.90	$391.00

*Special Offer: Full set of all available volumes (1,2,4,5,6 & Index): $350.00/Set

Order from: Scientific Publications Office, New York Botanic Garden, Bronx, NY 10458

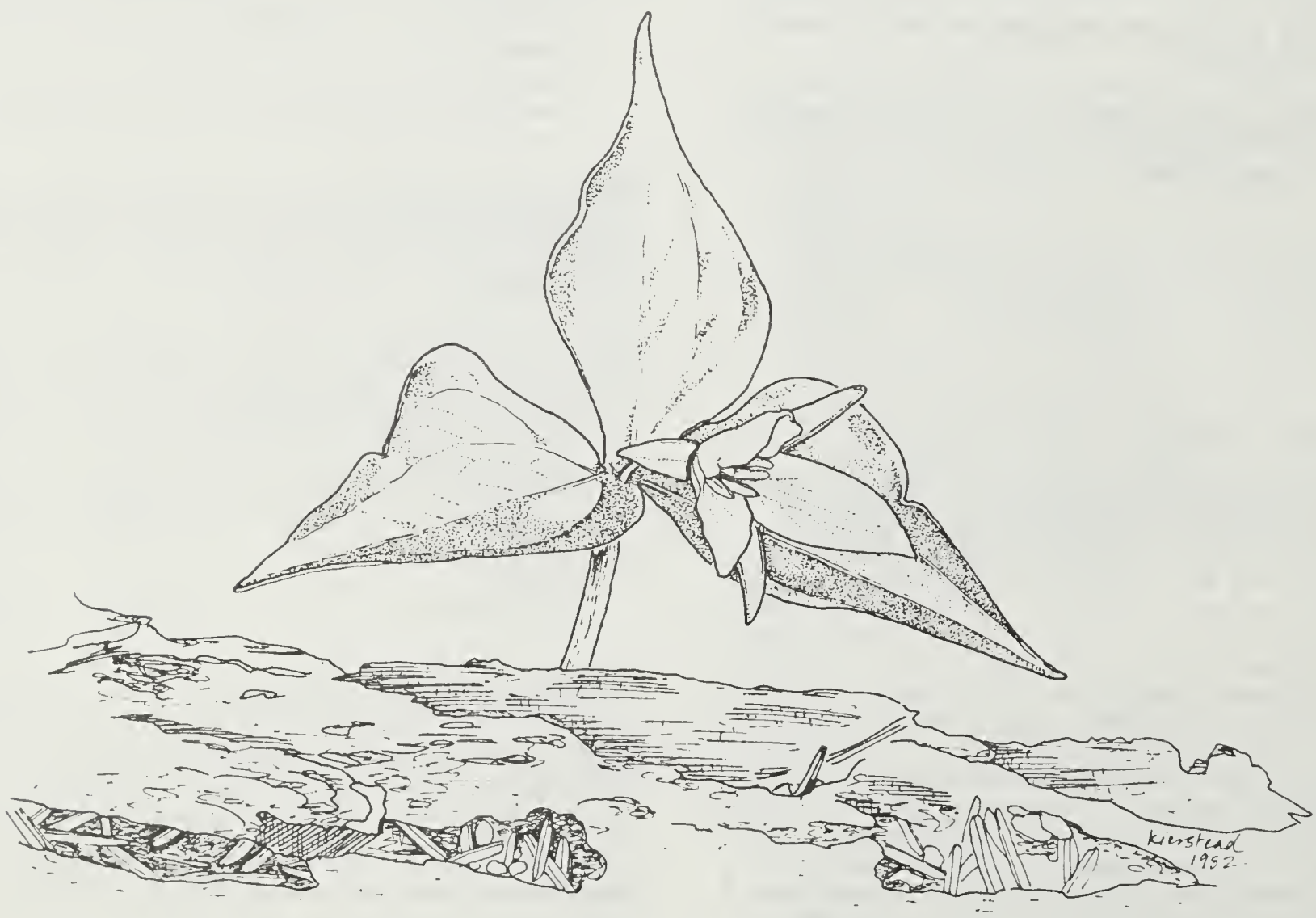
*Terms of Sale: Prices here quoted include postage and handling fee, and are valid in the USA only. Non-USA customers please inquire as to special postage fees.

With the first flush of flowers decorating Oregon's deserts & forests, it seems appropriate to remind ourselves that NPSO's raisons d'etre are conservation & understanding of Oregon's native flora. Although many of our members are interested in gardening with native plants, NPSO is not a garden club. Our Code of Ethics clearly does not condone the collecting of plants for personal use. This does not preclude growing plants from seed or carefully gathered cuttings. And if the seeds don't sprout, and the cuttings don't strike, the parent plant will still be intact in its wild home.

It is an unfortunate reality of the 80's that effective conservation must be accomplished in the political arena, because the decisions affecting the future of native plants are made by city officials, county commissions, and state & Federal agencies. It is especially important that, as NPSO enters the political fray, we keep our noses clean so no one can accuse our members of being threats to the flora we purport to save. After all, the act of joining NPSO implies tacit approval of its aims.

With NPSO-sponsored flower shows coming up, let's do our best to use the plants to their fullest. Invite special groups in for pre- or post-show educational programs. Advertise! Make sure copies of NPSO's Code of Ethics are posted around the show hall, so visitors come away with the right feeling about our organization. When everything is done, return those plants which can be returned (bulbous & rhizomatous plants, etc.), and make good pressed specimens of those which cannot. This means careful pressing and good label information about the site where the plant came from. When dry, the plants should be donated to a state herbarium. Little or no plant material should end up in the garbage.

Enjoy plants where they grow--you'll never see them in better surroundings than the places they call home.



Trillium ovatum
Drawing by J.R. Kierstead

Native Plant Society of Oregon Guidelines & Ethical Code

GENERAL GUIDELINE: THINK TWICE. USE DISCRETION. A PLANT IN PLACE IS WORTH TWO IN THE HAND. LOVE THY FLORA.

I. CHAPTER GUIDELINES

1) Know your rare, threatened and endangered species. Know your fragile environments and unique biotic communities.

2) Be alert to threats to native plants and their habitats. Appoint watchdog committees to keep aware of these threats and inform the chapter.

3) Take action to protect native plants. Work with all groups and the general public to protect native plants and their habitats. Be prepared to salvage plants where they are threatened by outright destruction. Help eradicate particularly aggressive and successful exotic plants that threaten native plants. Take responsible outings.

4) Educate your members and the public about native plants, and encourage them to use good judgment in the study, enjoyment, and use of native plants.

5) Encourage your members to grow native plants only from seeds or cuttings.

II. OUT THERE AMONG THE PLANTS

1) Outings for whatever purpose must never endanger a plant population. Encourage nondestructive modes of learning and enjoyment: photography, artwork, scientific description, aesthetic prose and poetry, and so on.

2) On group outings (field trips, conservation activities, class field studies), group leaders must take responsibility for protecting native plants from the activities of the group. All participants should understand the goal of plant protection, the purpose of the outing, and the means by which they can make the least impact on plants and the natural habitat.

3) Know where endangered species are growing and plan outings with this knowledge in mind.

4) Respect private and public property. Do not trespass. Know the regulations for use of the land and natural resources--public or private--your group is entering.

5) Respect the habitat as a whole. Avoid disturbing wildlife, such as nesting birds and nesting hornets.

6) Be sensitive to the human foot as a threat to plants. Visits to fragile environments should be carefully planned. Students should be given adequate direction by their instructor, and excessive collecting should be discouraged. Better one person enter a fragile area to identify a plant than the whole group.

7) Collecting should be considered only when identification cannot be made in the field or when it will contribute significantly to educational or scientific objectives. Collecting for whatever purpose should be done as inconspicuously as possible. Casual observers may not understand the reasons for collecting and may feel license to do likewise.

8) Collecting must never endanger a plant population. Collect seeds or cuttings in preference to whole plants. Do not collect underground plant parts except for identification purposes. Avoid excessive collecting: this calls for exercise of good judgment by the collector. Consider the use of rules of thumb for judging whether to pick or not to pick. Encourage group study of one specimen. Consider using weeds, garden species, or lab-grown specimens for educational purposes.

III. USING NATIVE PLANTS

1) Use of native plants--in wildflower shows, plant sales, and horticulture--must never threaten their populations.

2) Native plant species for sale should be obtained by salvage, seeds, or cuttings--in that order of priority--and whole plants should never be dug up, except for salvage. Seeds should not be sold. Growers must exercise discretion in collecting seeds and cuttings to avoid endangering plant populations.

3) Native plants for sale should state on the label how obtained or grown. Chapters should consider certifying commercial growers who follow good ethical practice, and should urge the public not to buy unless plants were obtained or grown according to these guidelines.

4) The sale and use of particularly aggressive and successful exotic plant species, such as gorse, broom, and pampas grass, should be discouraged.

5) Salvage of native plants should be encouraged when their destruction is certain: at quarries, mines, dams, building construction sites, road construction sites. Salvage is not necessarily called for, however, on logging sites, some recreational areas, and rangeland. Salvaged plants should be kept potted long enough before sale to ensure that they will survive the shock of transplant.

6) Wildflower shows should make maximum use of their educational potential. Inform the public of the goals of NPSO: explain the guidelines your chapter follows in studying, enjoying, and using native plants--including guidelines followed in collecting for the show; consider using all other educational options (slides, artwork, publications, herbarium collections, news media, etc.); and continue the educational "life" of display materials after the show by donating them to schools, libraries, or other constructive uses.

DARLINGTONIA PLIGHT PUBLICIZED

NPSO President Rhoda Love's comments were featured in a recent (Feb. 8) Eugene Register-Guard story titled "Fear Blooms in the Lily Bog". The piece describes the precarious situation of Darlingtonia californica, a plant native to coastal bogs of Oregon & northern California which is being dug and sold through mail-order nurseries nationwide (see accompanying ad example sent to us by NPSO member Wilbur Bluhm), capitalizing on its bizarre appearance and insectivorous habits.

"Discouraged by the federal process, Love and others hope Oregon will decide to protect its own flowers. Seeking safeguards for the Cobra lily and other threatened Oregon plants, the Native Plant Society and supporters plan to submit an endangered species bill to the Oregon Legislature in 1985.
"Maintenance of Cobra lily natural bogs for public enjoyment is Love's major concers, but she also argues that buying Cobra lilies is a waste of money. 'They won't survive outside their native habitat,' she says..."
"One of the Oregon Coast's estimated 20 Cobra lily bogs is the state-maintained Darlingtonia Wayside on Highway 101 a few miles north of Florence..."

The article closes with Rhoda's statement that "'People should see Darlingtonia alive and in the wild'...'They should not keep it like a pet.'"

The full page article was written by David Arnold, with color photos by Lori Borgman.

COBRA LILY (DARLINGTONIA CALIFORNICA) AUG-MAY

INSECT-EATING PLANT.
MOTTLED GREEN.

EACH PLANT INDIVIDUALLY PACKAGED IN LARGE POLY BAG WITH COLOR LABEL.

CBL-404 COBRA LILY Pkg $ 1.59

Cobra Lily Package Display AUG-MAY

CBL-406 COBRA LILY 20 PKGS $ 32.00 (Ea 1.60)
EACH PLANT IN POLY BAG WITH COLOR LABEL.

Advertisement from the catalog of Brown Bulb Ranch, 13024 Stone Ave. N, Seattle, WA 98133 & P.O. Box 67, Capitola, CA 95010.

FOR NATIVE PLANT GARDENERS

The August NPSO newsletter contained an article on native plant gardening by Daphne Stone. She offered to submit short articles on different native species which can be valuable as garden plants. After some controversial input, thought, and discussion we decided to postpone these articles until we have more information on availability. We feel that it is not right to suggest potential garden plants when they are not available to people in their local nurseries. Digging native plants is not advocated by the Native Plant Society. If small numbers of plants are dug by professional horticulturists and then propagated by seed, cutting, or division for future sale, then we can buy them with a free conscience.

Before suggesting plants to use in your gardens we would like you to help us gather some information.
WE NEED YOUR HELP!
When you visit your local garden stores and nurseries this spring, make a point to look around and see if they have any native plants for sale. Make a note of these, then ask the sales people the following questions:

1. Do you have any plants that are native to Oregon or the Pacific northwest?

If they do, ask:
2. Do you know how they have been propagated or if they have been dug from the wild?
3. If the plants have been dug, have they been grown in a pot for at least a year so that we know they can handle transplanting and have a chance of survival?

Send us a list of plants which you have found at nurseries and whatever you have found out about their origin, along with the name of the nursery. We will compile and publish the information when we feel we have a good start. Then we can make suggestions and provide information about the values and uses of native plants which are available. Remember, if we ask our nurseries for native plants, they'll realize there is a demand, so let's start asking!

Thanks,

Gaylee Goodrich
2167 Augusta
Eugene, OR 97403
485-3453

Daphne Stone
1934 Cleveland St.
Eugene OR 97405
344-3274

1984 Oregon Forest Wilderness Act Alert !!

Undisturbed watersheds provide the highest water quality and diverse habitat for fish, wildlife, recreation and other uses.

The U.S. Senate and House of Representatives are now shaping the final version of the Oregon Forest Wilderness Act of 1984.

Your help is needed *to seize this unprecedented opportunity and secure for this and future generations the enduring resource of Wilderness. Unless this bill is enlarged and then passed by Congress, critical watersheds, fish and wildlife habitat, recreation and ecological resources of our public forestlands will be lost forever.*

Please read and act today!

Oregon Forest Wilderness Bill Moving !

For five years Oregon conservationists have labored to enact a statewide Wilderness bill for portions of Oregon's roadless and undisturbed forestlands. Working with a broad and diverse coalition of hunters, sport and commercial fishermen, Indian Nations, professional guides and packers, resource managers, small businesspeople, scientists, outdoor recreationists and many others, Wilderness advocates have built a strong economic, biological, political and moral case to protect more than three million acres of Oregon's forested wildlands.

Both the House-passed bill for 1.2 million acres (HR 1149) and the Senate version contain some of the state's most outstanding forest wilderness, including critical wildlife and fisheries habitat, key watersheds, and important areas for hunting, fishing, boating, hiking and other forms of backcountry recreation. **But the proposed legislation encompasses barely one-third of the eligible lands that conservationists feel should be the minimum protected acreage. As the House and Senate work out their differences, concerned citizens must provide massive amounts of mail supporting specific Wilderness proposals and an expanded bill.**

Oregon Department of Fish and Wildlife

The continuation and improvement of salmon and steelhead runs depend in large part on the preservation of forest wilderness.

WILDERNESS *IS* MULTIPLE USE

Wilderness detractors are fond of saying that the designation of Wilderness is a "single" use. In their view, only forests which are roaded and logged are multiple use lands.

Applicable laws state that the multiple uses of the National Forest System are timber, watershed, fish and wildlife habitat, outdoor recreation and forage. Of those uses, only timber cutting is directly prohibited by The Wilderness Act. In fact, Wilderness provides the highest water quality and quantity, and the best wildlife habitat and recreation opportunities, not available on cut-over lands. Also, the grazing of domestic lifestock is allowed under limited conditions.

OREGON WILDERNESS ACT OF 1984
(as passed by House of Representatives)

Columbia Gorge Wilderness	40,900	acres
Badger Creek Wilderness	25,500	
Salmon-Huckleberry Wilderness	55,000	
Table Rock Wilderness	5,500	
Hidden Wilderness	47,000	
Mount Jefferson Wilderness Additions	13,000	
Middle Santiam Wilderness	19,000	
Old Cascades Wilderness Study Area	23,000	
Mount Washington Wilderness Additions	6,000	
Three Sisters Wilderness Additions	36,000	
Waldo Wilderness Study Area	63,000	
Hardesty Mountain Wilderness	7,000	
Diamond-Thielsen Wilderness	154,000	
Boulder Creek Wilderness	19,820	
Rogue-Umpqua Divide Wilderness	54,000	
Sky Lakes Wilderness	113,000	
Mountain Lakes Wilderness Additions	3,000	
Rock Creek Wilderness	6,500	
Cummins Creek Wilderness	8,800	
Wassen Creek Wilderness Study Area	12,000	
Grassy Knob Wilderness	21,500	
Red Buttes Wilderness	25,500	
Gearhart Mountain Wilderness Additions	3,730	
Coleman Rim Wilderness	7,825	
Mill Creek Wilderness	17,400	
Bridge Creek Wilderness	7,100	
Ochoco Canyons Wilderness	13,400	
Strawberry Mountain Wilderness Additions	35,100	
Glacier-Monument Wilderness	49,000	
North Fork John Day Wilderness Complex	218,000	
North Fork Umatilla Wilderness	18,000	
Joseph Canyon Wilderness	31,000	
Eagle Cap Wilderness Additions	67,000	
22 New Wilderness Areas	810,745	acres
8 Area Expansions:	317,830	acres
3 Wilderness Study Areas:	98,000	acres
TOTAL LAND AREA:	1,226,575	acres

A BRIEF PERSPECTIVE

Of Oregon's 62 million acres, about half is forested. Of this 31 million acres, just over one million acres is currently part of the National Wilderness System. Most of these protected lands are high elevation forestlands or above timberline in the "rock and ice" portions of the Cascades and Blue Mountains. Another 4.5 million acres remain as undisturbed and unprotected wildlands. But most of Oregon's forests, over 25 million acres, are roaded and used for logging and other "developed" purposes. In fact, Oregon's National Forests alone contain more than 70,000 miles of roads.

Of the 4.5 million acres of eligible "de facto" wilderness on Oregon's National Forests and Bureau of Land Management (BLM) forestlands, conservation and sportsmen associations want significant portions designated by Congress as Wilderness. Some organizations, like the Oregon Natural Resources Council (ONRC) and the National Audubon Society, favor the classification of 3.4 million acres as Wilderness. (Even the Oregon Dept. of Fish and Wildlife endorsed over 1.6 million acres in 1983.) 80% of Oregon's forest acreage, and 95% of the available timber productivity, **would still be available** for industrial interests. In this way we could protect some important fish and wildlife populations, leave a few streams intact, and maintain a semblance of forest ecosystem diversity and structure while not unduly harming timber production.

Important Additions Needed

The 1.2 million-acre HR 1149 provides for a moderate representation of Cascade Mountains ecosystems, but critical boundary adjustments are needed. Important fish and wildlife habitat in the Coast Range and Blue Mountains of northeast Oregon is not adequately protected in the bill. It is imperative that Oregon's senators and congressmen support conservationists' more comprehensive recommended Wilderness proposal (including **all** the areas in the House bill).

Although HR 1149 leaves out twice as much roadless land as it protects, there are particular areas that **must** be added to it. It is important to demonstrate that HR 1149 is **not** the conservationists' bill, but rather is a severe compromise and needs expansion.

Senator Hatfield will play a major role in the fate of this bill. It is up to conservationists, sportsmen, Native Americans and others to convince him and the other members of the delegation that the 1.2 million-acre House bill should be the **minimum** size of the final bill. They need to hear that you support **not only** all the areas and acreage contained in HR 1149, **but also** important additions to it.

TOP PRIORITY AREAS TO BE ADDED TO HR 1149

Below are **some** of the areas that conservations and others want to see added to HR 1149:

DRIFT CREEK (11,260 acres) Finest representative sample of old growth Douglas-fir forest left in Coast Range; habitat for bald eagle, spotted owl, marten and other old growth dependent species. Also a state-designated "Wild Fish" stream. Less than 2% of the Coast Range remains in a natural condition.

DEADHORSE RIM (13,615 acres) Together with Coleman Rim (in HR 1149), the only remaining pileated woodpecker, marten and fisher habitat left on the Fremont National Forest. Deadhorse Rim was the center caldera of an eruption, while Coleman Rim is an excellent example of a fault block formation.

LOOKOUT MOUNTAIN (15,577 acres) Most rugged terrain on the Ochoco Forest; spectacular recreation opportunities with outstanding views, wild horses and critical wildlife habitat.

MURDERERS CREEK (30,683 acres) Optimum habitat for elk and deer, adjacent to the state-owned Wildlife Management Area of same name; bighorn sheep, pronghorn antelope, wild horses, steelhead fishery. Includes 10,000 acre BLM Wilderness Study Area.

WAPITI (51,904 acres) 3000 of 4000 Rocky Mountain elk in the Heppner Unit depend on the 25% of the unit that remains in a wilderness condition. Also important spawning habitat for salmon and steelhead.

CHIEF LOOKINGGLASS (6,500 acres) Critical fisheries habitat for wild salmon and steelhead; provides vital high water quality for fish hatchery designed to help restore fish runs on Grande Ronde River System.

GRANDE RONDE CANYON (22,978 acres) 20 miles of wild river canyon; important anadromous fish producer and big game winter range; ponderosa pine, mixed conifer and lodgepole pine forests. River being studied for State Scenic Waterway potential.

TOP PRIORITY AREAS IN HR 1149 NEEDING BOUNDARY EXPANSIONS

Below are compromised but desirable boundary adjustments to selected areas already included in HR 1149. These modifications would more fully protect the values of the areas which HR 1149 seeks to preserve by Wilderness designation:

SALMON-HUCKLEBERRY (2000 acre expansion) Add 2 miles of lower Eagle Creek.

MOUNT JEFFERSON ADDITIONS (5681 acres) Key lower elevation ponderosa pine and Douglas-fir forest areas.

MIDDLE SANTIAM (2500 acres) Additional critical old growth forest stands.

OLD CASCADES (22,500 acres) Pyramids, Jump-off Joe, Browder Ridge and Moose Creek units should be added for important ecological diversity. Entire proposal needs to be upgraded from "Wilderness Study" to "Wilderness."

THREE SISTERS ADDITIONS (38,000 acres) Rainbow Falls, Cultus Mountain, outer Squaw Creek Falls and lower elevation areas on east side, as well as western forests of the Waldo Country, should be added.

SKY LAKES (12,000 acres) Lower Cherry and Red Blanket Creeks, other lower elevations areas for ecological diversity. Does not include Pelican Butte.

MOUNTAIN LAKES ADDITIONS (1500 acres) Little Aspen Butte and BLM Wilderness Study Area for wildlife habitat purposes.

GRASSY KNOB (13,030 acres) Copper Mountain, a key watershed area.

GEARHART MOUNTAIN ADDITIONS (770 acres) Section of North Fork of the Sprague River.

NORTH FORK JOHN DAY (94,000 acres) The Elkhorn Mountains, Battle Creek, Squaw Creek, Trail Creek, South Ireland and Beaver Creek units.

EAGLE CAP ADDITIONS (35,000 acres) Wing Ridge, Boulder Park, Pine and Eagle Creeks areas.

What You Can Do !!

1. WRITE A LETTER

All who care about Oregon's unprotected forest wilderness should **immediately write brief letters to Senator Mark O. Hatfield** (Senate Office Bldg., Washington, DC 20510) **and their Congressman.** He is either Les AuCoin (1st District), Bob Smith (2nd), Ron Wyden (3rd), Jim Weaver (4th) or Denny Smith (5th). The address: House Office Bldg., Washington, DC 20515.

a. Tell them in your own words that you **support the conservationists' proposal to protect the finest of Oregon's forest wildlands, 3.4 million acres, as Congressionally-designated Wilderness.** Let them know how strongly you **support the areas in HR 1149** as a good first step in sound land stewardship, and that you **oppose any reductions.**

b. Please **specify that areas and boundary expansions listed in this brochure be included in the final version of the bill.**

c. Mention **other areas** with which you are familiar and would like to see protected as units of the National Wilderness System.

2. SEND A MAILGRAM

For **faster delivery** send a **mailgram** or **public opinion telegram.** It costs a bit more, but it will have **more impact.** Call Western Union at (800) 257-2241.

3. SEND COPIES

Please **send copies of your letters and mailgrams to Senator Bob Packwood (same address as Sen. Hatfield), Oregon's other four Representatives, as well as other politicians and newspapers.** Wilderness is a statewide issue, and the 1984 Oregon Forest Wilderness Act will be finalized in a joint House-Senate resolution.

Your opinions during this special election year can make the difference. Let them be known!

4. WRITE A CHECK

The Oregon Natural Resources Council and other organizations have spent thousands of dollars and hours to pass this legislation. Even though the price is right (about 35¢ an acre!), we desperately need to raise the funds necessary to complete this final assault. Travel, including trips to Washington, DC, as well as increased phone, printing, copying, postage, audio-visual and other activities, cost money.

Please send a tax-deductible contribution to ONRC today.

The address: 1161 Lincoln Street, Eugene, Oregon 97401
(503) 344-0675.

SPONSORS OF THIS BROCHURE

American Alpine Club
Association of Northwest Steelheaders
Columbia River Citizens Compact
Columbia River Inter-Tribal Fish Commission
Federation of Western Outdoor Clubs
Friends of the Earth
National Audubon Society
National Wildlife Federation
Native Plant Society of Oregon
Natural Resources Defense Council
Northwest Rivers Defense League
Oregon Bow Hunters
Oregon Council, Federation of Fly Fishers
Oregon Division, Izaak Walton League of America
Oregon Environmental Council
Oregon Fishermens Association
Oregon Hunter's Association
Oregon Kayak and Canoe Club
Oregon Natural Resources Council
Oregon Salmon and Trout Resource Center
Oregon Wildlife Federation
The Wilderness Society
Wildlife Management Institute

THE LAWSUIT

On December 13, 1983, the Oregon Natural Resources Council filed suit in federal court to stop the Forest Service from destroying the wilderness characteristics of roadless areas during the Congressional deliberation concerning their fate. Citing Forest Service efforts to "legislate by chainsaw," the National Audubon Society and a number of its Oregon Chapters joined the suit as co-plaintiffs in early 1984. Soon afterwards the Forest Service suspended all further logging and roadbuilding activities in most inventoried roadless areas until Congress and/or the courts can make their decisions.

MALHEUR DESERT PLANT WORKSHOP

A one-week workshop, Desert Plant Population Studies, will be offered at Malheur Field Station from April 15 to 21. In this workshop I hope to encourage participants to study dynamic aspects of plant populations as a way to deepen their appreciation of plants and possibly make valuable contributions to knowledge about particular plants if they wish. So, we will go beyond identifying plants and learn simple techniques to answer questions, such as: how does the plant reproduce and is the population expanding? What eats the plant and how might this affect species populations? Although we'll be looking at desert plants, the techniques will be useful in most habitats. Prior knowledge of plant identification and general ecology are helpful but not required -- the only prerequisite is a great curiosity about plants. Class size is small to allow a friendly, personal interchange between instructor and students.

One to three university credits (quarter) or two semester credits can be obtained for participation in the workshop. The tuition fee is $175 ($185 for credit) and room and meals are $110 total. By way of comparison, three credits at a university could cost $220-275. Also, room and board works out to $16 per day which is hard to beat! Some work-study assistance is possible for reducing workshop costs.

In order for the workshop to be offered, at least six participants are needed so it's best to sign up as soon as possible so that the course won't be cancelled. However, registration will be open until April 12 for last minute decisionmakers.

To request a brochure and sign-up sheet, write or call Ethen or Mary Perkins, c/o Malheur Field Station, P.O. Box 260-E, Princeton, Oregon 97721, (503) 493-2629. If you'd like more information about the workshop before you sign up, please call me at 752-6170 (Corvallis); evenings best.

Tammy Maurer
Corvallis Chapter

MALHEUR FIELD STATION NEEDS COOK

Full time, seasonal cooking position available from April 1 to October 31, 1984. Room & board provided during employment. Duties include meal planning & preparation, serving & clean-up. Food service experience helpful but not essential. Applications for shorter periods of time also welcome. Send resume and references to Manager, Malheur Field Station, P.O. Box 260E, Princeton, OR 97721. *We are an equal opportunity employer.*

LEGISLATIVE COMMITTEE RECEIVES COPIES OF STATE PLANT-PROTECTION LAWS

Thanks to Faith Campbell of the National Resources Defense Council & to Linda McMahan of Traffic (USA), we now have a complete set of plant protection laws from every state in the Union! (Every state which has such a law)
Our Legislative Committee Chair, Rick Brown, is studying the laws & the summary material that Linda sent. He will have the job of determining which, if any, of these laws can serve as a model, or models, for an Oregon Endangered Species Act of 1985.
Thanks, Faith & Linda, for sending 1.5 lb. of material! And thanks, Rick Brown, for taking on the job of digesting it all!

-Rhoda Lova
NPSO President

GINNY CROSBY LEAVES STATE

I am resigning as a Board member for the Native Plant Society, as I am moving to Denver, Colorado with the BLM. I will no longer be a botanist, I am sorry to say, but will be writing computer programs for the Bureau's resource activities.

I do want to stress to everyone how important it is for the members of the Native Plant Society to get more involved with the Federal agencies if you really care about our native plants. Getting involved means going to public meetings, visiting the offices and reviewing management decisions, meeting with specialists, volunteering for projects, etc. The more you get involved the more influence you will have on the decision-making process.

The BLM is currently making recommendations on Wilderness Study Areas (WSAs) in Oregon. As you are aware WSAs are excellent places to preserve native plant communities. Members can get involved in the process by arranging and attending field trips into WSAs, conducting your own threatened and endangered plant surveys and species lists for the area, and by commenting on the Wilderness Environmental Impact Statement (not only as members of NPSO but as individuals). As a Bureau employee, I can say that public opinion <u>really</u> makes a difference, so get involved and make your comments known.

Virginia Crosby
District Botanist
BLM - Lakeview District Office

The Lakeview District BLM Office has no plans at this time to fill the Botanist position which Ginny is leaving; instead a resource clerk has filled the slot. The BLM needs watching, to make sure its officials adhere to Bureau policy, the Endangered Species Act, & the Federal Land Policy & Management Act of 1976 (FLPMA) when dealing with threatened & endangered species.

SAVE THE GATEWAY TO THE GORGE

The Sandy River bridge on Interstate 84 is the west entrance to the Columbia River Gorge. Here eastbound travelers leave behind the commercial-industrial clutter of the metropolitan area and instantly enter open space and natural surroundings. The break is sharp and dramatic, a fitting gateway to the magnificent Gorge.

But now the Oregon State Highway Department wants to change all this. They are planning to build a 24-hr. Port-of-Entry in the Columbia Gorge. All eastbound trucks would be required to stop for inspection, weighing, etc. The Port-of-Entry would include truck scales, offices, restrooms, and sewer facilities, a large truck parking lot, lighting for 24-hour operation, and long exit and entrance ramps. It would be a large complex, suitable only for location in an urban commercial-industrial zone.

There are such suitable sites in Hood River and The Dalles, and west of the Sandy River, but at this time the Highway Dept.--and local politicians--favor locating the Port-of-Entry on the east side of the Sandy River, right inside the gateway to the Gorge! Typically, the Highway Dept. is not concerned about the loss of scenic integrity which would result if city clutter is allowed to extend across the Sandy River. There is, of course, no way that a large Port-of-Entry could be camouflaged or "beautified" to make up for the permanent loss of open space. It would always be an ugly intrusion.

Governor Atiyeh has made a public commitment to secure scenic protection for the Gorge. We should call on him to bring the Highway Dept. into line with this commitment. Please write to the Governor, letting him know that you consider the Sandy River site unacceptable, that you do not want the entrance to the Gorge defaced by a truck facility. Emphasize that there are suitable sites elsewhere where there would be no conflict with the scenic beauty of the Gorge. Please write Governor Victor Atiyeh, State Capitol, Salem, OR 97310.

* *

So you want to visit a Wilderness Study Area, but you don't know exactly where they are? ½" to the mile intensive inventory maps are available from BLM for $1 each. You may need more than one to visit the area you are interested in. And you may need the standard quad maps for navigation (same price). Contact Don Geary at BLM's Oregon State Office, P.O. Box 2965, Portland, OR 97208; 231-6823.

* *

Statewide Wilderness Inventory maps are available free of charge from any BLM office. (Ed. note--Don't forget to ask for a numbered key to the map, or you won't know which # on the map goes with which named WSA.)

* *

Grazing fees decreased from $1.40 per animal unit month last year to $1.37 this year. The same range, if rented on the free market, would rent for $5 to $15 per aum.

OWYHEE WILDERNESS

The first week of February, the Boise District of the BLM issued a Draft Environmental Impact Statement (EIS). According to the Bureau, the purpose of the document "... is to develop a recommendation concerning the suitability of wilderness designation for eight wilderness study areas (WSAs) along the Owyhee River where the states of Oregon, Idaho, and Nevada join."

For 200 miles, through three states, the Owyhee River flows wild and free. Over time it has cut its way down through the basalt, rhyolite, and tuffaceous sedimentary rock of the northerly trending basin known as the Owyhee Uplands--probably the largest block of wild land in the lower 48 states.

The EIS discusses eight Wilderness Study Areas that total 436,047 acres. The 180,680 acre Oregon area begins upstream from Rome and runs to the Idaho & Nevada borders. Other WSAs are in Idaho & Nevada. BLM recommends a total of 374,160 acres for wilderness.

The ribbon of water, its broken canyon walls and surrounding plateaus, provide the basic habitat components--food, shelter, & water--for a vast array of wildlife. A sizeable population of California bighorn sheep, pronghorn, prairie falcon, sage grouse, river otter, well over 100 species of passerine birds and waterfowl call the Owyhee country home.

The sponsor of the Owyhee Canyon Unit in Oregon recommends expanding the area from 180,000 acres to 222,000 acres. The expansions are needed to protect wildlife habitat.

HOW YOU CAN HELP SAVE THE UPPER OWYHEE COUNTRY

Request a copy of the Owyhee Canyonlands EIS & respond to it before June 1. Documents can be obtained from:

BLM, Vale District Office P.O. Box 700 Vale, OR 97918	Questions: Rich Conrad 473-3144
BLM, Oregon State Office P.O. Box 2965 Portland, OR 97208	Questions: Don Geary 231-6823

Urge your friends & fellow conservationists to attend one of the two Oregon hearings on the Owyhee country:

April 10	Lions Club Hall, Jordan Valley	7:30 p.m.
April 12	Cosmopolitan Motel, 1230 NE Union, Portland	2:30 & 7:30 p.m.

Testimony may be limited to those who pre-register, so REGISTER EARLY (contact the BLM offices listed previously). Each hearing will be preceded by an hour of open house, which will probably be your best chance to talk personally with BLM officials.

* * * *

VOLUNTEERS NEEDED TO MONITOR WSAs

BLM administered Wilderness Study Areas are protected by an Interim Management Policy (Public Law 94-579 Sec. 603c 1976 43 CFR Ch II Dec 79, July 83). Unfortunately, BLM does not have the money or manpower to adequately monitor or enforce the Policy.

Whether conservationists like it or not, this is a time of austerity for conservation agencies. We have to find creative new ways to protect resources. The BLM is looking for volunteers to assist them in monitoring the Interim Management Policy. Volunteers will receive compensation for some travel expenses and in many instances, an opportunity to use government vehicles. The BLM may receive authority to pay per diem, though that is uncertain at this time. Volunteers will have the opportunity to work for, and closely with, BLM officers. The program should increase understanding between BLM & conservationists.

This season will be a time of learning & initiation for the program. BLM officers are looking for capable people who can attend a one day training session & then work a few weekends (or more) a season monitoring activities on one or a few WSAs. There may also be a chance to census wildlife, monitor riparian plots, etc. The Vale District seems most amenable to the program, followed by Prineville, Lakeview, & Burns in that order. For further information, contact:

Lakeview BLM	P.O. Box 151	Lakeview, OR	Doug Troutman
Burns BLM	74 S. Alvord	Burns, OR	Mark Hosket
Vale BLM	P.O. Box 700	Vale, OR	Rich Conrad
Prineville BLM	P.O. Box 550	Prineville, OR	Brian Cunningham

Information for Desert Wilderness Update is provided by Don Tryon, Sage Association, Inc.

* * * * * *IMPORTANT ADDRESSES* * * * * *

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.
Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.
Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.
Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.
Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.
Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.
Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.
Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.
William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.
Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

* *

WALKER CREEK DAM REPORT RELEASED BY BLM

A report covering the environmental impacts of the Walker Creek Dam and Reservoir proposal of the McMinnville Water and Light Department has been prepared by the Bureau of Land Management and is now available for public review and comment.

John Radosta, BLM Salem District realty specialist, said the dam and most of the 248-acre impoundment area would be on public lands under BLM jurisdiction. The location of the site is 12 miles northwest of McMinnville near the existing Nestucca Reservoir which currently serves the community.

Plans call for a 100-foot high earth and rockfill dam across Walker Creek with an impoundment which would supplement McMinnville's municipal water supply. The proposed dam would be the third in the city's water system. The reservoir would not be open to the public.

The report addresses the proposal, an alternative which allows bank fishing, denial of the application, and use of other sources of water.

"If the proposed dam and reservoir are approved," Radosta said, "there would be several environmental impacts. Most of these impacts would be mitigated. Some would not."

Among the residual impacts, Radosta noted, are the slight decline in fish production in the Nestucca River and the conversion of 211 acres of commercial timberland to a nontimber use.

The 120-page report is the product of research, data gathering and editing by CH_2M Hill (consulting engineers), the McMinnville Water and Light Department, and the BLM Salem District staff. Copies are available on request at the BLM Salem District Office, P.O. Box 3227 (1717 Fabry Road, S.E.) Salem, OR 97302.

A decision on the right-of-way application is expected in about one month.

DESERT CONFERENCE VI: MAY 19 & 20

The 6th annual Desert Conference will return to the Malheur Field Station south of Burns, OR this year. The Conference will focus on desert wilderness. Specific skills necessary for volunteer preservation efforts will be taught. State & regional strategy will be discussed & formulated. The Conference will be limited to 70 participants, & advanced registration is essential. Contact Sage Association, Inc., P.O. Box 85, Powell Butte, OR 97753 for registration information.

* * * *

A new Oregon BLM resource map is available. The map is similar to a highway map except it delineates land ownerships & highlights public land resources. $1 & available at any BLM office.

ARABIS IN SOUTHWESTERN OREGON

I. The Species

Linda Ann Vorobik, Emerald Chapter

I had an extraordinary introduction to Oregon's geographic and botanic diversity in 1978 when I was hired by The Nature Conservancy and worked with Jean Siddall, our RTE Plant Committee Chairperson. From the rare plant data that Jean and hard working field botanists had accumulated, I soon concluded two things. I wanted to learn more about Arabis (rockcress), and I wanted to spend my time learning in southwestern Oregon.

Why Arabis? The species are sometimes weedy looking natives and they are often merely fruiting stalks by one's first spring visit to the field. To add to these fine qualities, Arabis guarantee frustration for those brave enough to try to key them.

I first became interested in Arabis when I realized that many Arabis species are endemic to southwestern Oregon. A. aculeolata, or Waldo rockcress, is found only on the serpentine soils of the Illinois River drainage. A. koehleri var. stipitata (shrubby rockcress) is also a serpentine inhabiting species of the Siskiyous and is often found growing adjacent to A. aculeolata. Its common name is very appropriate; once I found a skeleton of shrubby rockcress with a woody base almost 2 cm in diameter! A. koehleri var. Koehleri is a nonserpentine species with a local distribution around Roseburg.

Other serpentine endemics include Arabis macdonaldiana (Macdonald's rockcress) which is found in the southern Siskiyous of Oregon and south into northwestern California. It was found to be much more common than previously thought by Duane Goforth (see below) but still enjoys an Endangered Species status. Arabis serpentinicola (serpentine rockcress) is a high elevation, glabrous form very similar to A. macdonaldiana. This is a doubtful species as very few herbarium records exist. Look for it in the high Siskiyous on serpentine.

Ashy rockcress, Arabis subpinnatifida, is another serpentine inhabiting species in southwestern Oregon and northwestern California. It can be distinguished from all the other serpentine species because of its whitish-hoary basal leaves and fruits that are descending.

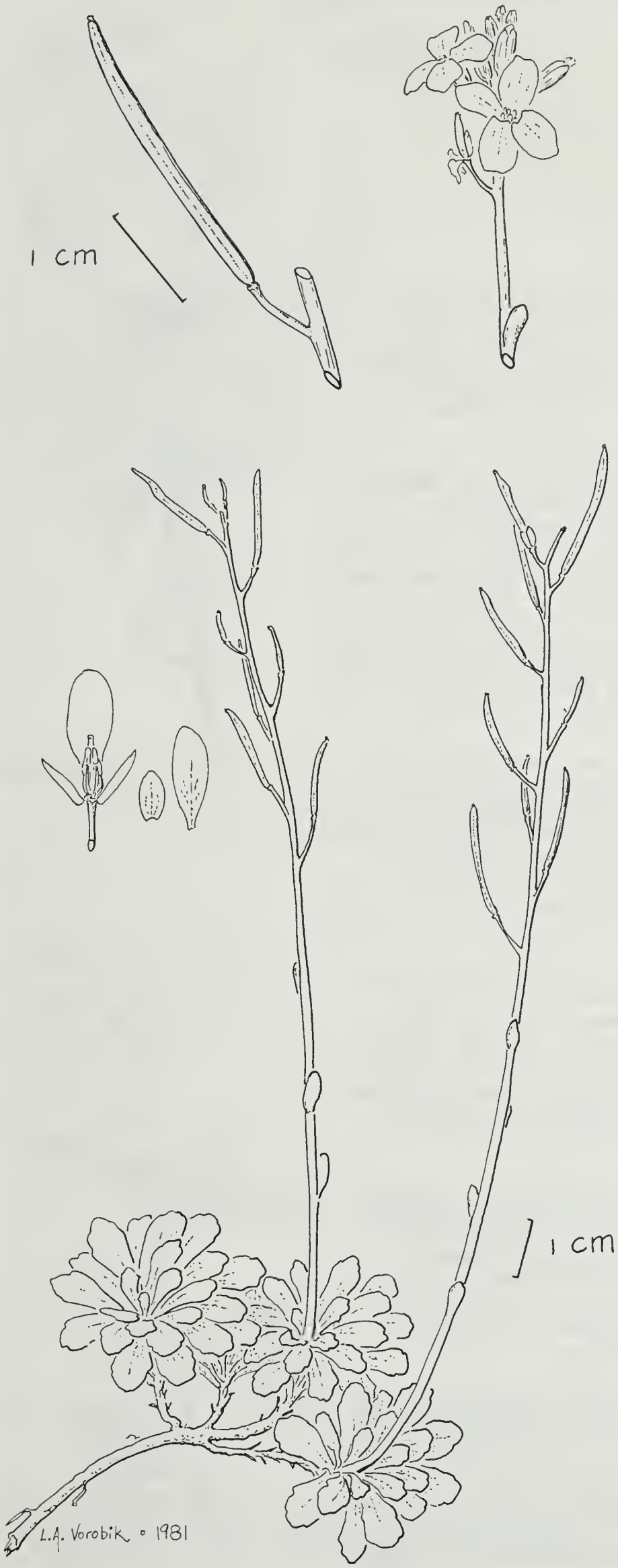
Endemism, or the local occurrence of a species, is in itself intriguing. An endemic species is a rare form and thus a curiosity but it also is a species that is interesting in an evolutionary sense. The above species occur on a restricted soil type but there are other reasons for endemism. Very young or newly-formed species, or very old species are often endemic. Or, a plant species may depend solely upon an endemic insect pollinator.

A group of very similar species of Arabis (all endemics) challenged my curiosity. The "purple-flowered" Arabis include A. aculeolata, A. macdonaldiana, and A. serpenticicola, but also A. oregana (Oregon rockcress) which occurs in Oregon east of the Medford valley and south into California, and A. modesta (Rogue Canyon rockcress) which occurs not only in the Rogue River Valley, but also on the Klamath River in California. A. blepharophylla (rose rockcress) is a central California endemic and also a member of the "purple-flowered" Arabis. It must be noted that these are not the only Arabis with purple flowers. They are, however, the only Arabis with very large (2 cm diameter) purple-pinkish flowers in Northwest North America. Their showy flowering racemes and later stalks of ascending fruits arise from one or more rosettes of oblanceolate, dentate basal leaves. To distinguish the species from one another one must get a very close look at these leaves and their vestiture, or hair types.

On my first trips to southwestern Oregon I was searching for these rare purple-flowered species, but as I marvelled at the great diversity in vegetation of the Siskiyous, I could not ignore the numerous other Arabis that I encountered. I found A. aculeolata at low elevation serpentine sites with A. koehleri var. stipitata and A. subpinnatifida. A. modesta was found on greenstone parent soils of the Rogue River Valley near a population of A. aculeolata. I found A. oregana on basalt outcrops in the Cascade foothills, with A. breweri (Brewer's rockcress), A. microphylla (littleleaf rockcress), A. sparsiflora (sicklepod rockcress), and in the woods nearby, A. glabra (towermustard). To complete my elevational Arabis gradient I found on the summit of Mt. Ashland A. sparsiflora (again), A. holboellii (Holboell's rockcress), A. drummondii (Drummond's rockcress), A. platysperma var. platysperma (flatpod rockcress), A. platysperma var. howellii (Howell's rockcress) and A. lyallii (Lyall's rockcress). It amazed me that there were seven more southwestern Arabis that I had not encountered. Out of the 25 Arabis species that occur in Oregon, I had found 13 species in the southwestern quarter of the state.

I began my graduate studies at the University of Oregon proposing to study the purple-flowered group, but discovered to my dismay that a Humboldt State student, Duane Goforth, had already started with precisely the same problem (and has, I believe, finished with a Master's in Botany).* I was set back, but not put off. By this time my field work with

**Mr. Goforth's report, The taxonomy & ecology of the Arabis blepharophylla complex of northwest California & southwest Oregon, will be published by the USFS.*



Arabis serpentinicola
Drawing by Linda A. Vorobik

Arabis had possessed my interest. To my increasing wonder, I had found two, three, or even four Arabis species growing together (sympatrically). When I saw these intermingled rockcress I wondered, (1) are the species hybridizing? is that why there is so much variability and taxonomic difficulty within the group?, and (2) if the species are not hybridizing when growing in intermingled patches, what forces, or reproductive isolating mechanisms, are acting to keep the species distinct? These questions formed the basis of my doctoral research in Biology at the University of Oregon.

For further reading:

Rollins, R.C. 1941. A monographic study of Arabis in western North America. Rhodora 43: 289-325, 348-411, 425-481.
Also contributions from the Gray Herbarium of Harvard University. No. 138.
1973. Purple-flowered Arabis of the Pacific Coast of North America. Contributions from the Gray Herbarium 204: 149-154.

Stebbins, G.L. 1979. Rare species as examples of plant evolution. In the Endangered Species: A symposium. Great Basin Naturalist Memoirs No. 3: 113-117.
& J. Major. 1965. Endemism and speciation in the California flora. Ecological Monographs 35: 1-35.

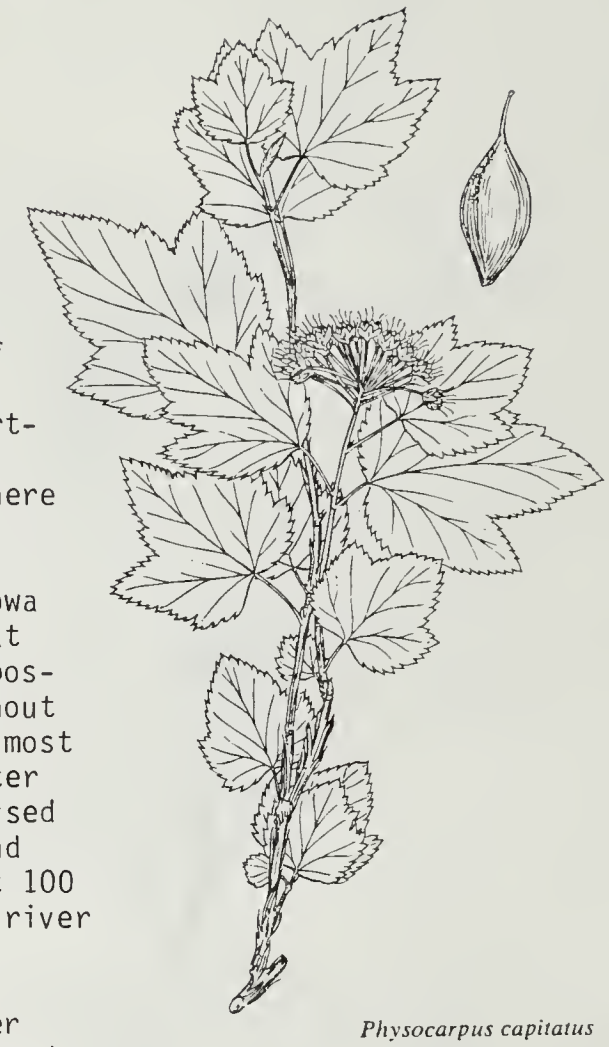
Coming up: Arabis in southwestern Oregon
Part II Arabis and species concepts: mental food for (in)digestion.
Part III Hybridization and reproductive isolation in southwestern Oregon Arabis
Part IV Evolution in southwestern Oregon Arabis (speculation of a 29-year old)

Endangered, threatened and rare plant associations and habitats of Oregon

by Jimmy Kagan

LOW-ELEVATION RIPARIAN WOODLANDS Of EASTERN OREGON

(Sixth in a series)



Physocarpus capitatus

Some of the most diverse and biologically interesting plant communities occur in riparian areas. These are areas which are characterized by the presence of flowing water--areas adjacent to rivers, streams, and seasonal creeks. The riparian areas surrounding perennial streams and rivers are particularly import- and because they are extremely productive. Plants growing here are free from our typical summer drought; this is especially important in eastern Oregon, where water is critical for all living creatures.

Eastern Oregon has myriad rivers fed from the Cascade, Ochoco, Blue, and Wallowa Mountains. Some of these have formed steep, narrow canyons; others broad, flat valleys. All of these areas were characterized by seasonal flooding, silt deposition, erosion, and other natural processes resulting from moving water. Without a doubt, riparian areas are the most important, most drastically altered, and most heavily used habitats in eastern Oregon. Most have been dammed to provide water for irrigation, lakes for recreation, or to control flooding. All have been used intensively by cattle and sheep, causing dramatic changes in the appearance and species composition of these areas. Many of the changes occurring in the last 100 to 150 years have been so great that we are forced to guess what the original river valley bottoms and low-elevation (below 4000 ft.) riparian areas looked like.

A combination of natural factors such as seasonal flooding and year-round water creates conditions suited to species which are fast growing and able to withstand (or react to) disturbance. The best example of this is black cottonwood (*Populus trichocarpa*). This tree occurs in and dominates most major low-elevation riparian habitats. It is both prolific and very fast growing. (In Eugene I once saw a cottonwood tree which had fallen and been cut where it crossed the bike path. It was over four feet in diameter and had only 42 annual growth rings.) It is the only large tree which occurs in our low-elevation riparian areas.

Smaller trees and large shrubs often dominate these areas with black cottonwood. In northeastern and north-central Oregon, these include western birch (*Betula occidentalis*), alder (*Alnus incana & A. rhombifolia*), hawthorn (*Crataegus douglasii & C. columbiana*), red osier dogwood (*Cornus stolonifera*), and many species of willow (*Salix exigua, S. lasiandra,* and others). Other woody species include various currants (*Ribes* spp.), mockorange (*Philadelphus lewisii*), snowberry (*Symphoricarpos albus*), wild rose (*Rosa woodsii*), and Pacific ninebark (*Physocarpus capitatus*). Almost all of the native riparian species, including the trees and shrubs, are damaged by extended cattle use.

The most interesting feature of natural riparian areas is the pattern of vegetation created by natural flooding disturbance. Most of the river valleys should be a matrix of well established large cottonwoods, dense thickets of dogwood, willow, birch, and hawthorn, and open meadows dominated by native sedges, grasses, and rushes. This diversity of habitats in a small area provides many niches for wildlife. The wildlife, including birds, beavers, and muskrats, would in turn often have a profound effect on the structure of the vegetation.

The current classification of riparian types of eastern Oregon includes two major natural communities: 1) cottonwood-alder riparian woodlands (forested types), and 2) hawthorn-willow riparian areas (shrubby types). The Nature Conservancy has spent much time and energy for the last three years attempting to locate riparian areas in eastern Oregon which have both a natural water system (no dams), and native vegetation (ungrazed or lightly grazed). This search has proved largely fruitless, making it difficult to describe or protect these important communities. Based on current field work, there appear to be two important forested cottonwood plant communities:

Cratægus columbianum

Cratægus douglasii

1) mountain alder-hawthorn-black cottonwood, with willow patches
2) alder-birch-black cottonwood, with willow and red osier dogwood

The understory of each of these types should be dominated by shrubs (currants or sagebrush, for example) and/or by native grasses and sedges, including red fescue (*Festuca rubra*), tufted hairgrass (*Deschampsia caespitosa*), slender wheatgrass (*Agropyron caninum*), mannagrass (*Glyceria borealis, G. elata, & G. grandis*), redtop (*Agrostis alba*), and sedges (*Carex aquatilis, C. nebrascensis, C. rostrata* and others).

The shrubby types are dominated exclusively by willows and/or hawthorn (although chokecherry does occur also). Understories of the low-elevation types should include snowberry, Nevada bluegrass (*Poa nevadensis*), basin wild rye (*Elymus cinereus*), and wild rose. The willow-hawthorn types appear to be more widespread in the smaller creeks in the Columbia Basin, and in most of the Grand Ronde Valley streams.

Because of the extremely heavy livestock use these areas receive, the dominant understory species are Kentucky bluegrass and cheatgrass (*Poa pratensis & Bromus tectorum*). These are both very aggressive plants which have evolved to use disturbed habitats. Getting these weedy, introduced species out of a system which is typified by both natural and unnatural disturbance has never been done. It will certainly be difficult if it is possible. Most state and federal agencies are now interested in rehabilitating their riparian areas, though most work so far has been in attempts to reestablish native overstories. The Nature Conservancy is still hoping to locate and protect a natural riparian area in eastern Oregon, but efforts may have to be shifted to protection and restoration of a partially disturbed community. This natural system is surely among the most threatened in Oregon--and here we may have lost a most beautiful, interesting, and integral part of our natural heritage.

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Siskiyou:	Wayne Rolle, P.O. Box 531, Ashland, OR 97520; 482-0093
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Send BULLETIN copy to the editor by the 10th of the month (editor's address listed above).

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Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 5 May 1984

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CHAPTER NEWS

Blue Mountain

--- No scheduled meetings or field trips for May.

Corvallis

12 May, Sat. Field trip; FLORA OF THE SAND DUNES, a day trip to Newport to assist the Marine Science Center in developing a plant list for the sand dunes. Contact Esther McEvoy, 754-0893.

14 May, Mon. Meeting, 7:30 p.m., Cordley Hall Rm. 2087, Oregon State Univ., Corvallis. WILDFLOWERS OF THE CENTRAL WESTERN CASCADES, with speakers Paul Alaback & Pat Loveland. Elections will also be held--a good turnout is essential!

19 May, Sat. Field trip; day trip to LIMPY ROCK RESEARCH NATURAL AREA, via the scenic Bohemia Mts.; a joint venture with Emerald Chapter. Meet in Cottage Grove at the Village Green at 8:30 a.m. From there we will travel up Sharps Creek, then down Canton Creek to the N Umpqua River. At Limpy Rock we will help map the population of Sarcodes sanguinea (snow plant), & see other special interest plants. Contacts: Corvallis-Dan Luoma, 758-8063; Emerald-Alan Curtis, 345-2571.

2 June, Sat. Field trip to PROPOSED MIDDLE SANTIAM WILDERNESS for those who cannot make the Annual Meeting. Contact: Brian Heath, 752-6127.

9 June, Sat. Field trip to JACKSON-FRAZIER WETLAND. Contact Esther McEvoy, 754-0893. All day trip.

23 June, Sat. Field trip to FINLEY WILDLIFE REFUGE, S of Corvallis. Contact Esther McEvoy, 754-0893. All day.

14 July, Sat. Field trip to wildflower meadows in the PROPOSED OLD CASCADES WILDERNESS. Contact Brian Heath, 752-6127.

21 July, Sat. Field trip to MARYS PEAK, W of Corvallis. Contact Esther McEvoy, 754-0893. All day trip.

--- There will be no more chapter meetings until October.

Emerald

5 May, Sat. Field trip, MCKENZIE RIVER TRAIL, led by Ken Lodewick (344-6533); a joint trip with the Obsidians. Sign up at the YMCA.

7 May, Mon. Meeting, 7:15 p.m., Rm. 123, Science Bldg., Univ. of Oregon campus. A multi-media show on EIGHT DOLLAR MOUNTAIN in SW Oregon; come for a preview of the 27 May field trip (see below).

12 May, Sat. (NOTE CHANGE) Field trip to MT. NEBO, MCKENZIE RIVER DRAINAGE, led by Alan Curtis (345-2571). Meet at 9 a.m. in the South Eugene High School parking lot at 19th & Patterson.

19 May, Sat. Field trip to LIMPY ROCK RESEARCH NATURAL AREA to view mysterious monotropoids; a joint trip with the Corvallis Chapter, led by Dan Luoma. Meet at 8 a.m. at SEHS parking lot.

20 May, Sun. MOUNT PISGAH ARBORETUM WILDFLOWER SHOW.

26 May, Sat. Field trip to SILVER CREEK FALLS, led by Ken Lodewick (344-6533); a joint venture with the Obsidians. Sign up at the YMCA.

27 May, Sun. Field trip to EIGHT DOLLAR MOUNTAIN, led by Frank Lang of SOSC & the Siskiyou Chapter. Members of other chapters are invited to join us, but please fire a warning shot if you are leading a large contingent (Leighton Ho, 345-3252). We will rendezvous with Frank at 9 a.m. at the Selma Store on Hwy. 199. Carpooling & camping arrangements will be discussed at the May meeting.

High Desert

12 May, Sat. Field trip to THE DEVIL'S GARDEN WILDERNESS STUDY AREA. Meet at 8:30 a.m. in back of McDonald's in Bend. Rough road driving & hiking.

29 May, Tues. Meeting at Cascade Gas Bldg., 7:30 p.m., Bend. Christy Steck will give her popular WILDFLOWERS OF THE DESERT program. We will also assign various jobs for the State meeting at SunRiver in June--we hope many will be able to take part.

Mid Columbia

2 May, Wed. Meeting, 7:30 p.m., Mosier School.

Portland

New officers of the Portland Chapter are: Mary Jane Fredericks, President; Louise Godfrey, 1st V.P. (program chair); Doris Ashby, 2nd V.P. (field trip chair); Rhoda Lewis, Treasurer; and Rosemary Kenney, Secretary.

5-6 May, Sat. & Sun. Portland Chapter WILDFLOWER SHOW AT OMSI. Please call Florence Ebeling, 244-4122, if you are able to help with identification & labeling of plants, set-up, or dismantling of the show.

8 May, Tues. Meeting, 7 p.m., First United Methodist Church, 1838 SW Jefferson, Portland. Rhoda Love will speak on HYBRIDIZATION BETWEEN NATIVE & INTRODUCED HAWTHORNS IN THE WILLAMETTE VALLEY. Rhoda did here research at the Univ. of Oregon on this work for her Ph.D.

12 May, Sat. Field trip to BALD BUTTE, E side of Hood River Valley. Surprises for your plant list, scenery a bonus. Meet at 8:00 a.m. at K-Mart, NE 122nd & Sandy Blvd. (N of I-84 at 122nd exit); S end of parking lot. Hiking about 3 mi.; leader, Esther Kennedy.

19 May, Sat. Field trip, MT. HOOD area; Bald Mountain if possible, or best alternate depending on snow level. Meet at 8:15 a.m. at K-Mart (see above), bound for ZigZag Ranger Station to join our leader, Glenn Walthall at 9:30 a.m.

26-28 May, Sat. - Mon. Field trip, LAKEVIEW & ROADS EAST. For this Memorial Day weekend, assembly is at noon Sat., at junction of Hwy. 395 & State Hwy. 140, about 4 mi. N of Lakeview. Another all-day junket on Sun. homeward on Monday. Leader, George E. Lewis, Jr. Not essential, but George would like to hear from those planning on the trip: 796-7066 (office); 292-0415 (home).

9 June, Sat. Field trip, BADGER CREEK area. Meet at 7:00 a.m. at K-Mart (see above). A long day, driving 250 mi., hiking 6 or 8 mi., in this wilderness-proposed area. Leader: Rick Brown. NOTE: Sunset magazine includes this trip in a get-acquainted-with-wilderness feature. Rick needs to know how many non-members we can accomodate. If you count on going, call him now, 222-1146.

Siskiyou

New officers of the Siskiyou Chapter, as of March 8, are: Andy Kier, President; Cindy Cripp, Vice President; Shelley Tanquary, Secretary-Treasurer; Lucy Muir, Field Trip Chair; Larry Loftus, Public Relations Chair.

5 May, Sat. Field trip; ASHLAND NATURE TRAIL. Check out the local stuff--half day easy hike. Meet at Ashland Bi-Mart at 9 a.m.; bring lunch if you like. Dave Rogers 482-5520.

10 May, Thurs. Meeting, 7:30 p.m., Rm. 171, Science Bldg., Southern Oregon State College, Ashland. Jimmy Kagan of The Nature Conservancy will give a program on IDENTIFYING & PRESERVING CRITICAL HABITAT IN SOUTHWEST OREGON. Jimmy will explain how the Oregon Critical Areas Program is protecting natural areas and will ask our chapter for areas we have identified as needing protection.

19 May, Sat. Field trip to JENNY CREEK MOUNDS. Wayne Rolle, and Wayne Almarez of the Soil Conservation Service will jointly lead this trip to scope out vernal pool patterned ground, in the Cascade foothills. Meet at Medford K-Mart at 8:30 a.m., Ashland Bi-Mart at 9:00. Very easy walking; return mid-afternoon. Bring lunch & gas money; 60 mile round trip. Wayne Rolle 482-0093.

Willamette Valley

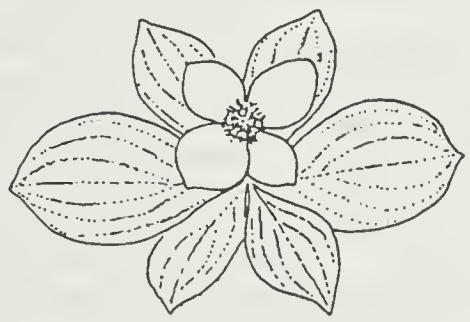
NPSO notecards have been selected for sale by the state Capitol giftshop--encourage your friends to purchase them there!

5 May, Sat. Field trip, HUNTER CREEK, NESTUCCA DRAINAGE. Carpool from south Salem K-Mart at 7:30 a.m. Contact Clint Urey 743-2802.

12 & 13 May Sat., Sun. WILDFLOWER SHOW at Silver Creek Falls State Park, sponsored by Willamette Valley Chapter (see note in this issue).

19 May, Sat. Field trip, YAQUINA HEAD. Shore plants, tidepool ecology; carpool from S. Salem K-Mart, 7:30 a.m. Clint Urey 743-2802.

26 May, Sat. Field trip to SNOW PEAK. Carpool from S. Salem K-Mart, 8:00 a.m. Clint Urey 743-2802.



RANGE ECOLOGIST TO SPEAK IN BEND

The Society for Range Management, in conjunction with the Oregon State University Extension Service, is sponsoring Allan Savory in a one day seminar, "A Potential Solution to Environmental Degradation",to be held Friday, May 25, at Central Oregon Community College. The seminar begins at 9:00 a.m. in the Pinckney Center Auditorium of Pence Hall on campus. A registration fee of $10.00 will include lunch. Pre-registration is important to guarantee a seat at this interesting and informative seminar. Send the registration fee of $10.00 or phone Glenn Adams, Northwest Agri-Tech, 20383 Rae Road, Bend, Oregon, 97702, at 389-2125 by May 18.

The Savory Grazing Method is viewed both with skepticism and acceptance by ranchers, professional range managers, county and state extension specialists, and universities. "The largest hurdle," says Savory, formerly of Rhodesia, "has been convincing range professionals, including personal friends, that the grazing method does not negate all the range management knowledge gathered through the decades of research. The Savory Grazing Method is built on that research. My contribution is a new technology based on a re-interpretation of existing data."

NEED A MOTHER'S DAY IDEA?

We have Native Plant Cards for sale at $3.00 each pack or $2.50 if you buy them at a meeting. Charlene Holzworth will mail them to you or your favorite friend if you send $3.00 to Native Plant Society Cards, 2524 NE 34th Ave., Portland, OR., 97212. If you would like some of the new orchid postage stamps add on the extra amount and they will be included in your order.

The Wildflower Show at Silver Creek Falls State Park lodge, sponsored by NPSO's Willamette Valley Chapter, will be held Mother's Day weekend, May 12-13. The show will be open from 10 to 5 on Saturday & Sunday, and on Monday & Tuesday will be open by appointment for school groups with teachers. For an appointment, call Suzanne Martin, coordinator, 873-8681.

The show will feature riker mounts by La Rea D. Johnston of Oregon State University, commemorating early botanists; included are species named after David Douglas and Archibald Menzies. Assisting with the show are the Lyons Garden Club, which will provide hosts and hostesses; and the Lebanon Garden Club. Othella Heath will provide a fern display.

President's letter:

Dear Fellow NPSOers,

This will be my final letter to you as president of NPSO. On June 2, at our Annual Meeting at Sunriver, Dr. Herm Fitz will take over the leadership of our society. I intend to remain active, however, and to submit Bulletin articles on ecology from time to time.

Newly-elected officers are listed elsewhere in this Bulletin. I wish once again to thank our nominating committee, Marge Ettinger, chair and all the candidates who were willing to serve our society on the state level. Best of luck to Herm and to the new officers and board members and thank you to retiring officers Wilbur Bluhm, V.P., Florence Ebeling, Secretary, Nadine Smith, Treasurer, and board members Larry Scofield, Marge Ettinger, and Florence Ebeling for their hard work on behalf of NPSO over the past 2 years.

I hope as many of you as possible will be in attendance at Sunriver on the weekend of June 1 and 2 to see the society leadership pass to the new officers. Please remember that members of High Desert Chapter have been working for a year to prepare a fine meeting for you. Many excellent field trips and other activities are scheduled. These annual meetings give us all a chance to get reacquainted with each other and to "talk plants" with folks from other parts of Oregon. See you in Bend next month!

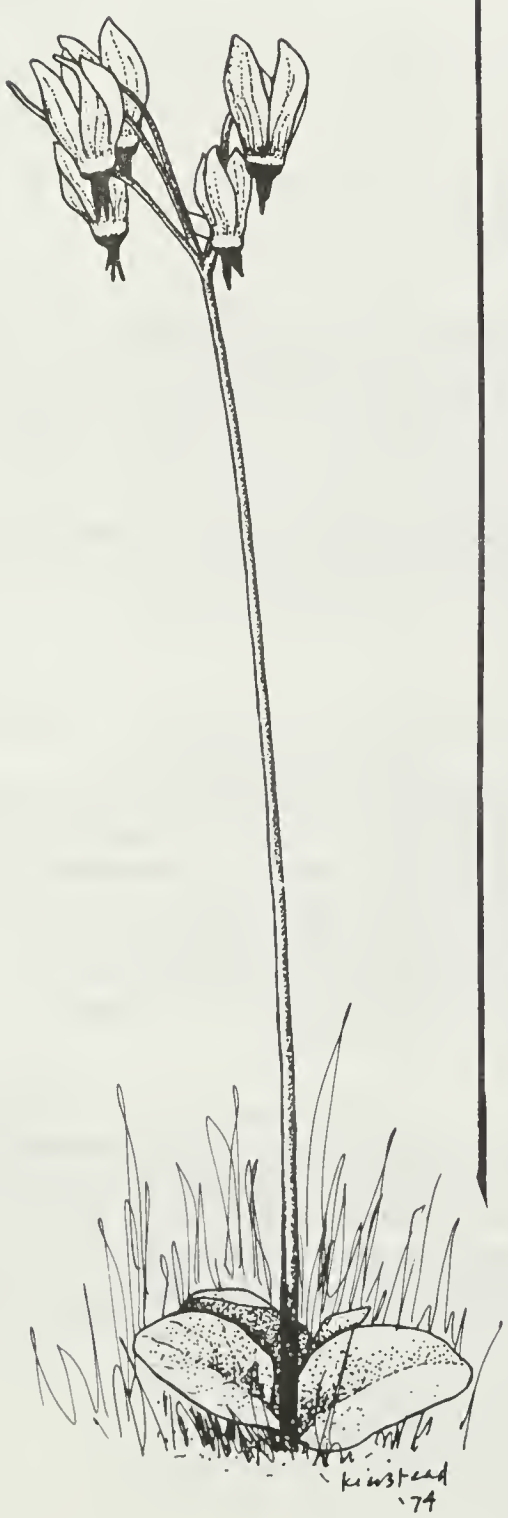
I want to leave two thoughts with you. First there is the problem of the vanishing BLM botanists. There is at present not one full-time BLM botanist working east of the Cascade Mountains! (Virginia Crosby of Lakeview was the last and she resigned from our Board last month and left the state.) Please read the letters to William Leavell in this issue, and join Stu Garrett and me in voicing your concern to the BLM and to Senators Hatfield and Packwood about this deplorable situation.

Finally, and most importantly, there is our Legislative effort. We MUST pass an Oregon Endangered Species Act in 1985. Working toward this end needs to be a priority item for every chapter and every individual who feels he or she can help. Please begin NOW to contact your elected representatives and the candidates from your district. Point out that of over 100 Oregon plant species that could be EXTINCT within 5-30 years, only 3 have so far received Federal protection! Oregon must protect her own species! Let's work together toward this goal.

I have very much enjoyed my last two years. THANK YOU TO EVERYONE who has helped me.

Flowers Forever,

Rhoda Love



Dodecatheon hendersonii

Election Results

NPSO's 1984 state election results are now final. Ballots were counted by Leighton Ho and Nancy Ruleman of Emerald Chapter, on April 3. Our new state officers, who will serve one-year terms, are:

President . . . . . Herm Fitz
Vice-President. . . . Michael Fahey
Secretary . . . . . Jeanne Huffstutter
Treasurer . . . . . Marge Ettinger

At-large positions on the Board of Directors, which will expire in 1986, will be filled by Susan Kephart, Veva Stansell, and Rhoda Love. Floyd Hendron, with the fourth highest number of votes, has been appointed by NPSO President Rhoda Love to serve the remainder of Virginia Crosby's term, which expires in 1985.

Our thanks to all the candidates, and congratulations to the new officers.

Welcome, New Members

CORVALLIS CHAPTER
David Dalton
Merthel S. McConnel

EMERALD CHAPTER
Alice Richter
Mary B. Carlson
Barbara S. Thompson
Larry & Martha Pike
Ellen A. Crumb

HIGH DESERT CHAPTER
Wendy Robinson
Philip A. Shoemaker

PORTLAND CHAPTER
Joanne Mentz
Jan Patton
David A. Anderson
Bessie Keens
Nick Iliinsky
Eloise H. Crandall
Steve & Sandra Kuziemski
and family
Ed Alverson

SISKIYOU CHAPTER
Cindy Cripps
Al & Norma Lange
James E. Roberts
Shelley Tanquary
Linda Swisher

WILLAMETTE VALLEY CHAPTER
Jean Massie

NPSO Annual Meeting: June 2-3

Newly-elected NPSO President Herm Fitz will preside over the general meeting at 8:30 p.m. on Saturday, June 2, in the Great Hall at SunRiver. Chapter reports, committee reports, and a vote on by-laws changes will take place at that time, to be followed by the evening's featured program on "Grasslands of Central Oregon", by SunRiver naturalist David Danley.

Kathleen Cooper, David Danley, Stu Garrett, & other members of the High Desert Chapter have been working for a year now to prepare a fine meeting for us. HOPE TO SEE YOU ALL THERE!

R/E News

Chapter R/E Committee Chairmen now have the lists of plants to be given special attention in field checking this summer, so get in touch with them if you wish to help.

As always we need reports for all R/E species seen, but two groups have been singled out for special consideration: the first are those no one has reported since the Oregon project began in 1973; the second are those for which more information is needed before status can be determined.

A sincere thanks is due to the faithful members of the Portland Chapter Committee who have gathered every week since January to compile the field-checking lists.

One of the plants on the Review List, and the next in our series of R/E taxa which have been published but are not yet in the floras, is Sisyrinchium hitchcockii. This new species, named in honor of C. Leo Hitchcock, was described in : Henderson, Douglass M. 1976. A biosystematic study of Pacific Northwestern blue-eyed grasses (Sisyrinchium, Iridaceae). Brittonia 28:170-171.

SISYRINCHIUM HITCHCOCKII D.Henderson, sp.nov. Rhizomatous perennial herb, pale glaucous green; roots numerous, coarse, pale yellow to tan; leaves shorter than the stems, lax to ascending or strict, (2.2-) 3-4 (-6) mm wide, the margins entire to finely denticulate; stems 1-3, erect to ascending, simple or branched with a leaf-like bract subtending one or two pedunculate spathes, conspicuously 2-winged, (1.5-) 2.5-4 (-4.5) mm wide, up to 5.5 dm tall, the margins entire or occasionally with minute, widely spaced teeth; spathe terminal on the stem or pedunculate, the bracts very unequal when simple-stemmed or subequal when pedunculate; inner bract 20-25 (-28) mm long, the outer margin entire to finely denticulate, the inner margins narrowly hyaline for about 2/3 the length of the bract; outer bract 23-37 (-45) mm long, often abruptly tapered to an acute, incurved apex, the outer margin entire to finely denticulate, the inner margins narrowly hyaline 1/2 - 3/4 the length of the bract, connate at the base for (3.1-) 5-6 (-7.5) mm; flowers 2-7 on stout, glabrous, slightly spreading pedicels generally exceeding the inner bract; perianth dark reddish-purple, very rarely dark blue, the yellow eye infrequent or more often lacking, the segments narrowly elliptic to narrowly oblanceolate, often truncate, aristulate, emarginate, (12-) 15-18 (-20) mm long; outer tepals with a length/width ratio greater than 3; filament column (5-) 6-9 mm long, purple, glandular proximally for (1.5) 2-3.5 (-4) mm; anthers yellow-orange, 1.5-2.8 mm long; ovary at anthesis 2-3 mm long, spherical stipitate-grandular; capsules (5-) 6-7 (-8) mm long, globose; seeds 1.9-2.5 mm in diam., dark brown to black, spherical, coarsely reticulate, 11-29 per capsule; n = 32.

S. hitchcockii

Type: UNITED STATES, Oregon. Douglas Co: Douglas Co. Airport, north of Roseburg, 20 May 1970. D. Henderson & R. Gates 772P.

Distribution: Valley grassland and oak savannas, Humboldt Co., CA to the Willamette Valley, OR.

Representative Specimens: Humboldt Co: Cape Ridge, 3 mi. E of Cape Mendocino, 17 Jun 1938, Joseph P. Tracy. Douglas Co.: Roseburg, May 1914, Wm. Cusick 3890A; 7 mi E of Wilbur, 11 May 1971, D. Henderson & R. Gates 814P.

Sisyrinchium hitchcockii is perhaps the most striking species of the genus in the western states. The large, purple flowers, wide stems and leaves, and rhizomatous habit set it apart from all other taxa including S. bellum, with which it frequently occurs.

All Sisyrinchium should be identified from fresh material as they lose the key characters of flower color and tepal shape when dried.

Sisyrinchium hitchcockii should be blooming now (early May to June) in the Roseburg area. It is also known from a collection made on 25 May 1944 on Highland Road near Corvallis.

Look for it and let me know what you find.

Jean Siddall
State R/E Chair

Dr. Henderson's* welcome revision of the Sisyrinchium of the Pacific Northwest also is not yet in our floras, so leave your books on the shelf and take the following silhouettes of tepal shape and spathe bracts with you when identifying this genus.

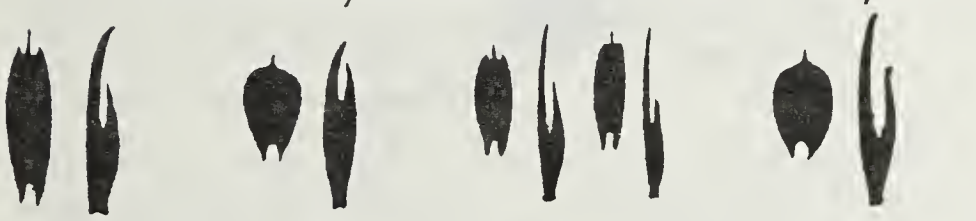
In his revision, Dr. Henderson recognizes seven Sisyrinchium in Oregon and southern Washington:

Four have entirely connate (united) filaments

- S. hitchcockii, with its large (12-20 mm) purple flowers and rhizomes
- S. bellum, known from both sides of the Cascades in so. Oregon to California, has small (less than 14 mm), wide, blue, cuneate tepals with dark blue nerves; stems often branched
- S. idahoense, widespread in the PNW, can be distinguished from S. bellum by its narrow, usually blue-violet tepals often over 15 mm long, simple-stemmed habit, and much longer outer spathe bract, united about 4 mm (7mm)
- S. sarmentosum, with pale blue tepals up to 14 mm long, is known only from Klickitat and Skamania Cos, Wn.

In three others, filaments are not connate the entire length

- S. californicum is the yellow species along the coast from Vancouver Is. to California
- S. douglasii is magenta, pink, or occ. white
  - in var. inflatum, which occurs from Klickitat and Yakima Cos., Wn., to Idaho and California, the filament column is abruptly inflated above the base
  - in var. douglasii, the var of w. Wn., the Columbia Gorge, and e. slope of Wn. Cascades, the filament column is only slightly or not at all inflated



S. hitchcockii *S. bellum* *S. idahoense* *S. sarmentosum*

var. *douglasii* var. *inflatum*

S. douglasii

*Dr. Henderson is the Director of the Herbarium at the University of Idaho in Moscow, Idaho.

VOLUME 4 OF INTERMOUNTAIN FLORA READY

First the good news: volume 4 of *Intermountain Flora* by A. Cronquist, A.H. Holmgren, N.H. Holmgren, J.L. Reveal, & P.K. Holmgren, is now available by mail from the New York Botanical Garden. This volume, covering the Gentianales, Solanales, Lamiales, Callitrichales, Plantaginales, Scrophulariales, Campanulales, Rubiales, and Dipsacales (families Gentianaceae through Dipsacaceae), is the third published in the series. Vol. 1 came out in 1972, Vol. 6 in 1977, and the remaining vols., 3, 5, and 2 are expected in 1986, 1987, and 1989, respectively.

Now for the bad news: this long-awaited volume will cost you $77.50. It is probably worth it. The price includes postage. If you can find nine other customers, you may place a single ten-book order and save 10% on the total. Payment must accompany your order. Order from: Scientific Publications Dept., New York Botanical Garden, Bronx, NY 10458.

I'll be glad to serve as coordinator for a group order, since I want a copy. Write or call me (my address & phone are on the back of the Bulletin).

- JK

SEQUOIA PARK 2ND IN TRAVEL SERIES

The next program in the Willamette Science & Technology Center's Travelogue Series is a lecture and slide presentation by Gail A. Baker, on Exploring the Wilderness in Sequoia National Park. The slide tour will explore and contrast the terrain and plant communities as we travel upwards in elevation from the gently rolling foothills to the craggy granite peaks above tree line. You will see spectacular spring wildflower displays in the foothills, majestic Giant Sequoia trees, clear alpine lakes, lush meadows, and impressive snow capped peaks. In addition a handout will be available with wuggested readings and a display of maps, books, and other literature pertaining to Sequoia and the Sierra Nevada.

The program will be offered Tuesday, May 8 at 7:00 p.m., WISTEC, 2300 Centennial Blvd., Eugene, OR. Admission is $2.00 for adults, $1.00 college students & seniors, and $.75 children

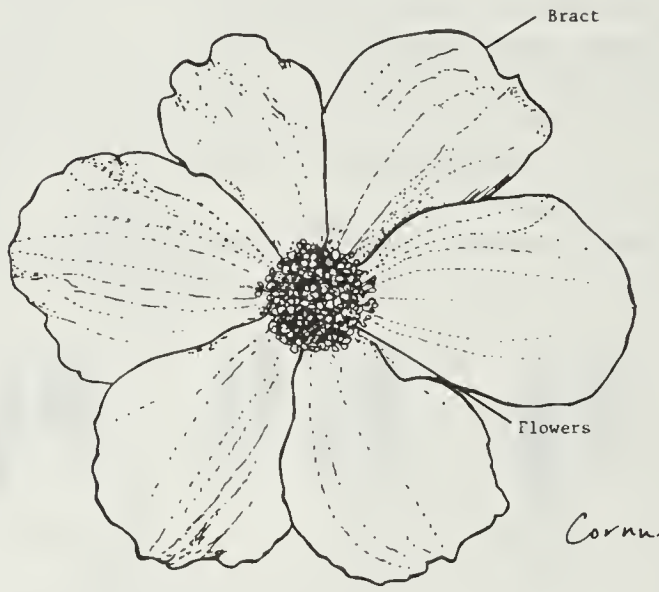
ARABIS BLASTED --Installment Two

On April 6, 1984, I attended a meeting of the Joint Legislative Committee on Water Resources of the Oregon State Legislature in Salem. The topic of the hearing was the newly retrofitted Winchester Dam on the North Umpqua River at Roseburg. The facility is killing fish, although it was "guaranteed" not to, and I was there, along with a number of other individuals and representatives of fishing organizations to protest the continued operation of the turbines during the coming peak period of salmon and steelhead smolt migration. I also knew, from talking to Rhoda and from the article by Julie Kierstead in the August, 1983 NPSO Bulletin, that a threatened and endangered plant, Arabis koehleri (Koehler's rock cress) had been present on the dam site and that a third of that local population had been destroyed by blasting during construction. This heedless destruction was another result of the pell-mell rush to complete this construction project without proper attention to environmental concerns.

After a full day of testimony, everything that I had planned to say on the subject of fish had been adequately said by others, so when my turn came to testify, I concentrated upon the rare plant destruction at the site as another example of the error in allowing this project to proceed without following the regular procedures required by the Federal Energy Regulatory Commission, including the filing of an environmental impact statement. As a result of assurances by Governor Atiyeh and others that there would be no adverse environmental impact from this project, it had been granted an exemption from these procedures. The Governor claimed that the Winchester Project would not only not damage the environment but would even improve it. With similar greasing of the pressure-points up and down the line, the project slid through and was completed in record time. We are just now beginning to realize what we may have lost in terms of environmental and economic damage to the tourist and fishing resources of the area.

Most of the committee members seem to be convinced that the dam is a threat to the fish resources of the river, and the information on the disregarded rare plants on the site corroborated the evidence that the project should have been more carefully examined for its environmental impact. Exemption from normal procedures was clearly in error in this case. Several members of the committee, particularly Rep. Tom Throop and Sen. Ruth McFarland (she has a Ph.D. in genetics and is co-chair of the committee), might be considered interested in the issue of rare and endangered plants. Rep. Carl Hosticka, Rep. Larry Campbell, and Sen. John Kitzhaber, onlookers, also appeared interested in the issue.

--Glen A. Love,
Vice-President
McKenzie Flyfishers,
Eugene



Cornus nuttallii

* * * * * * IMPORTANT ADDRESSES * * * * * *

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.
Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.
Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.
Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.
Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.
Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.
Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.
Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.
William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.
Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

Books reviewed

Hawaii's Vanishing Flora by Bert Y. Kimura and Kenneth M. Nagata, 1980. Published by The Oriental Publishing Company, P.O. Box 22162, Honolulu, Hawaii 96822, $5.95 paper.

Why a book review on endangered flora of Hawaii in our Oregon publication? For one thing, it's nice to know what kind of publicity other states are achieving. Secondly, as Hawaii is a popular vacation destination, some of us might have a chance to search for (and perhaps see) a few of these plants.

The vegetation of Hawaii has evolved in unique ways due, in part, to the island's isolation. There are approximately 2200 species of native plants of which nearly 97% are endemic. But the original flora of Hawaii may have numbered many thousands of species more. Plants have been lost ever since man first came to the islands with his crops and animals. Today, Hawaiians are more aware of their losses and potential losses thanks to publications such as this one, and they seek to ensure the survival of all those endemics remaining.

Although numerous popular articles have been written about rare plants in Hawaii, the author's goal was to produce a book for "semi-serious botanists" as well as beginners. The result is a very attractive and informative book (the size of Reader's Digest magazine) chock full of color photos and text.

For those not familiar with Hawaiian natural history, there is an excellent introduction which sets the scene. Geography, exploration, settlement, foreign fauna and flora introductions, and basic land management philosophy are discussed. Brief mention is also made of Hawaii's endangered species law, which prohibits the taking of endangered plants. The reader is also introduced to the state of Hawaii's Natural Area Reserves -- a program begun in 1970 but, according to the authors, "the full potential of this system has yet to be realized."

Next comes the meat of the book. Fifty-six species, ranging from small members of the Compositae to arborescent Lobeliads are featured. Excellent color photos, including both close-ups and habitat shots acquaint the reader with the plants. This book is not a flora as there are no keys or technical descriptions of the plants. But there is an informative text which invites reading. References are included to aid the more serious reader. Locations where plants occur are mentioned only in a general sort of way for, as the authors state in their introduction, "It is not our intent to publicize exact localities for fear that increased visitation will create more stress upon the plants as well as the fragile environments in which they live."

Four of the five Hawaiian plants officially protected under the Endangered Species Act of 1973 are illustrated here. It is interesting to note that of the species illustrated in this book, 15 are trees and 30 are shrubs.

Much of Hawaii's vanishing flora occurs in nearly inaccessible areas where hiking is extremely difficult. The authors have fought their way through endless miles of brush-covered hillsides to bring us pictures and information about plants that we might not otherwise see.

You will enjoy Hawaii's Vanishing Flora.

Alan B. Curtis
Emerald Chapter

Gaultheria shallon

We get letters:

March 26, 1984

Hello-

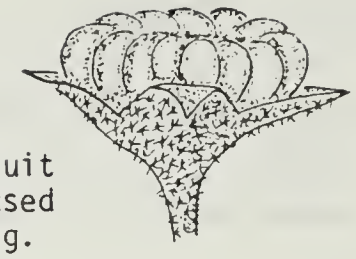
I would like to compliment you on your notecards of Oregon's Rare and Threatened Plants by Linda Ann Vorobik. I got them at a Made in Oregon store when I was visiting a couple of months ago.

I find the designs of the plants beautifully drawn, and I think the information about them on the back is very interesting. So I am enclosing a check for $10.00 for a set of your notecards. I trust this will cover the cost and handling charges, plus a small donation.

Sincerely yours,

/s/ Richard Neuman
Elkins Park, PA

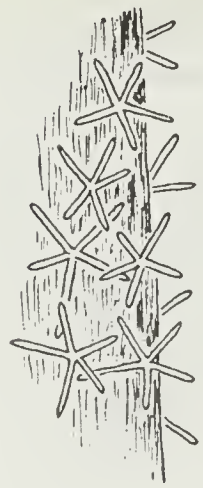
PLANT FAMILY PROFILES by Herm Fitz



A schizocarp - the typical fruit of Malvaceae. The loosely-fused carpels are arranged in a ring.

The Malvaceae - MALLOW FAMILY

The Mallow Family is fairly large, consisting of about 1000 species in 80 genera, spread throughout most of the world except for very cold regions. Members are particularly abundant in tropical South America. Twenty-seven genera occur in the United States, but only five are represented in Oregon. Introduced from Europe, three weedy species of Mallow or "Cheeses" (*Malva*) are naturalized in disturbed ground, as around barnyards. Of the native genera, the largest is the Checkermallow group (*Sidalcea*) with 13 species scattered throughout the state. Many of these are showy perennials of open prairies and meadows, and, largely due to habitat destruction, no less than 8 of the 13 are considered threatened or endangered. Two genera are referred to as Globe Mallow: *Sphaeralcea*, with two species in arid regions and dry plains east of the Cascades; and *Iliamna*, with 3 species on both sides of the Cascades. Of the latter, *I. latibracteata* is only rarely found in southwestern Oregon. Finally, the Alkali Mallow (*Sida hederacea*) occurs on the west slope of the Steens Mountain.



Highly magnified stellate pubescence.

A raceme of flowers of Rose Sidalcea (*Sidalcea virgata*). Note the simple, palmately-lobed leaves.

Members of this family may be herbs, shrubs or trees, with alternate simple leaves, entire or lobed, and usually palmately veined. Very often the plants have a "stellate" pubescence on the vegetative parts (tiny hairs are starlike) and the sap or juice is mucilaginous. The five-parted flowers are regular and bisexual, borne solitarily in axils of leaves or in clustered cymose or racemose inflorescences. The sepals are free or joined at the base, often subtended by a set of bracts called the "epicalyx." The petals are separate and usually convolute (or "twisted") in the bud. A unique stamen arrangement is found here: some indefinite number have their filaments united below into a tube which surrounds the pistil and attaches basally to the corolla. This arrangement is called "monadelphous." The ovary of the pistil is superior, of two to several fused carpels with axile placentation, usually in a weakly united ring which matures into a capsule or a schizocarp (the latter resembles a large round cheese cut into segments - hence the common names "cheeses" or "cheeseweed." This type of fruit is quite noticeable in hollyhock.). The style branches and stigma lobes can be seen protruding through the filament tube, the number of lobes being equal to the number or twice the number of carpels.

A generalized flower of Malvaceae. Note the 5 separate petals, the separate stigmas, and the numerous monadelphous stamens. Stellate pubescence is seen on the pedicel and calyx.

This family has a few notable members: probably of greatest importance is Cotton (*Gossypium hirsutum*). Okra (*Hibiscus esculenta*) is a food plant grown in warmer climates for its edible fruits; ornamentals include Hollyhock (*Althaea*) and Hibiscus (*Hibiscus*).

We may now write the floral formula:

$$Ca^5\ Co^5\ S\infty\ P\underset{-}{2}\infty$$ with a superior

ovary. You will find members of this family easy to recognize! When you notice regular, 5-parted flowers with numerous, monadelphous stamens and simple, often palmately lobed leaves on plants that may have stellate pubescence and mucilaginous juice, and if the carpels are loosely fused into a ring-shaped group - you will know for certain that you have found a member of the Malvaceae - the Mallow Family.

COMPUTER PROGRAM AVAILABLE TO ALPHABETIZE YOUR PLANT LISTS

Do you return from field trips with your notebook full of plant names that you would like to sort by family and alphabetize? I had the same problem until my son, Stan wrote a computer program in APPLE-BASIC called "PLANTS".

This program does the job for you! If you have an Apple II, IIe, or II+ or access to one, all you have to do is type in your plant names in any order, and the program will automatically and instantly (almost!) sort and alphabetize them by family , genus and species. And it will provide you with any number of print-outs.

"PLANTS" is for sale for $5.00 on your disk or $7.50 disk included. Send check for $5.00 plus your disk, or $7.50 (we supply disk) to:

Stanley G. Love
LOVE SOFTWARE
393 FulVue Drive
Eugene, Oregon 97405
345-6241

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Jean Davis Memorial Award Fund . . . $ _____
Rare and Endangered Plant Fund . . . $ _____

*All contributions to the Native Plant Society of Oregon, a non-profit organization, are tax deductible. Please make checks for dues & contributions payable to NATIVE PLANT SOCIETY OF OREGON. Send completed form & full remittance to: MARY FALCONER, NPSO MEMBERSHIP CHAIR, 1920 Engel Ave. NW, Salem, OR 97304.

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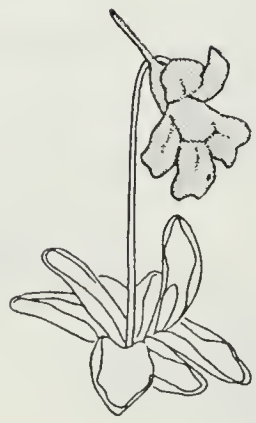

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The NPSO Bulletin is published monthly by the Native Plant Society of Oregon, incorporated under the laws of the state of Oregon. All are welcome to join the Society; membership includes a subscription to the Bulletin. Membership applications, from the foregoing page or provided by Chapter presidents, should be sent to: Mary Falconer, Membership Chair, 1920 Engel Ave. NW, Salem, OR 97304. Send changes of address, including old address and zip, to: Mary Falconer (address above).

Send Bulletin copy to the Editor by the 10th of month; Editor's address & phone listed above.

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Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 6 June 1984

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BOTANICAL GARDEN

CHAPTER NEWS

Blue Mountain

--- No scheduled meetings or field trips for June.

Corvallis

2 June, Sat. Field trip to PROPOSED MIDDLE SANTIAM WILDERNESS for those who aren't attending the Annual Meeting. Contact Brian Heath, 752-6127.

9 June, Sat. Field trip to JACKSON-FRAZIER WETLAND. Contact Esther McEvoy, 754-0893. 1/2 day trip.

23 June, Sat. Field trip to FINLEY WILDLIFE REFUGE, S of Corvallis. Contact Esther McEvoy, 754-0893. 1/2 day trip.

14 July, Sat. Field trip to wildflower meadows in the PROPOSED OLD CASCADES WILDERNESS. Contact Brian Heath, 752-6127.

21 July, Sat. Field trip to MARYS PEAK, W of Corvallis. Contact Esther McEvoy, 754-0893. All day trip.

--- No more chapter meetings until October.

Emerald

9 June Sat. Field trip to HORSE ROCK RIDGE near Marcola; a joint trip with Willamette Valley (Salem) Chapter; led by Alan Curtis, 345-2571. Meet at 9 a.m. in the South Eugene High School parking lot at 19th & Patterson.

11 June, Mon. Meeting, 7:15 p.m., Rm. 30, basement of Science I, Univ. of Oregon. The featured speaker will be Kate Fields, discussing the ECOLOGY OF PECK'S PENSTEMON (Penstemon peckii).

16 June, Sat. Field trip to LITTLE PIGEON PRAIRIE, a bog in Willamette Nat. Forest; led by Dave Wagner, 683-2609. Bring rubber boots. Meet at 8 a.m. at SEHS parking lot (see 9 June for directions).

23 June, Sat. Field trip to IRON MOUNTAIN on the South Santiam; led by Robin & Ken Lodewick, 344-6533. This is an Obsidian trip & sign-up is required. Registration board is at the Family "Y", 2055 Patterson. Meet at SEHS parking lot at 8 a.m. (see 9 June for directions).

30 June, Sat. Field trip to TABLE MOUNTAIN, SE of Cottage Grove; led by Alan Curtis, 345-2571. Meet at 9 a.m. at SEHS parking lot (see 9 June for directions).

4 July, Wed. Field trip to BOHEMIA MOUNTAIN, SE of Cottage Grove; led by the Lodewicks. This is an Obsidian trip & sign-up is required. Registration board is at the Family "Y", 2055 Patterson. Call Ken & Robin Lodewick, 344-6533, for meeting place.

14 July, Sat. Field trip to WALDO COUNTRY; led by Leighton Ho, 345-3252. Meet at SEHS parking lot at 8 a.m.

High Desert

9 June, Sat. Field trip to THE BADLANDS WILDERNESS STUDY AREA, ca. 8 mi. E of Bend. Meet at 8:30 a.m. 4 mi. E of Bend where the road to Prineville meets Hwy. 20 at the flashing light. A notice for this trip appeared in Sunset. Leader: Alice Elshoff. Volcanic & other geologic features will be examined. Plants of the area have not been studied much, so our participation is most welcome. Roads can be negotiated with ordinary car with care.

14 July, Sat. Hike to the top of BLACK BUTTE. Carry water & lunch. Meet at 8:30 a.m. in back of McDonald's in Bend.

Mid Columbia

6 June, Wed. Meeting, 7:30 p.m., Mosier School.

Portland

Unless otherwise stated, our field trip meeting place is the K-Mart at NE 122nd & Sandy Blvd. (exit I-84 at 122nd northbound & meet at S end of parking lot). If you have questions about any field trip, please call the leader or Doris Ashby, 245-2977.

9 June Sat. Field trip to BADGER CREEK AREA. Meet at 7:00 a.m. at the K-Mart. A long day (250 mi. driving & 6-8 mi. hiking) in this proposed wilderness area. Sunset magazine includes this trip in a get-acquainted-with-wilderness feature. Leader: Rick Brown, 222-1146. Please call Rick if you intend to go; he needs to know how many non-members we can accomodate.

12 June, Tues. Meeting, 7 p.m., First United Methodist Church, 1838 SW Jefferson (enter parking lot from 18th Ave.). ALASKA: WRANGELL & POINT BARROW, the forests & the tundra, by Jean Siddall, who was there twice last year.

**Three NPSO-led hikes for the "Columbia Gorge Days" program:*

16 June, Sat. *DOG MOUNTAIN. This strenuous hike (2400 ft. gain & 6 mi. round trip) offers beautiful wildflowers & impressive views of the Gorge. Meet at 8 a.m. at the Dept. of Motor Vehicles (NE 60th & Glisan), or 9:15 a.m. at the N end of Bridge of the Gods. Leader: Shep Wilson, 228-7823.

*GRASSY KNOLL, a unique botanical & scenic area in Gifford Pinchot Nat. Forest; ca. 6 mi. of easy hiking. Meet at 8:00 a.m., parking lot at NE 17th & Multnomah. Leader: Elizabeth Handler, 244-5320.

17 June, Sun. *WYGANT-CHETWOOD LOOP; ca. 5 mi. of hiking with minor elevation gain. Meet at 8:00 a.m., parking lot at NE 17th & Multnomah. Leader: Elizabeth Handler, 244-5320.

23 June, Sat. Field trip to MONTE CARLO (or best alternate, depending on snow level). This 6 mile hike is in the Buck Creek Trail System of the Gifford Pinchot N.F. Meet at 8:00 a.m. in parking lot at NE 17th & Multnomah. Leader: Elizabeth Handler, 244-5320.

30 June, Sat. Field trip to ROOSTER ROCK; a chance to see the flowers of early summer at 4600 ft. Meet at 9:00 a.m. at the Old High School in Molalla. Leader: Dr. Herb Armentrout, 658-2751.

7 July, Sat. Field trip on the BUCK PEAK TRAIL; a gentle 8-mile hike to see flowers in the Lolo Pass area. Meet at 8:00 a.m. at K-Mart. Leader: Doris Ashby, 245-2977.

Siskiyou

14 June, Thu. Meeting, 7:30 p.m., Rm. 171, Science Bldg., Southern Oregon State College, Ashland. Julie Kierstead of the Berry Botanic Garden will give a program on the Berry Garden's SEED BANK FOR OREGON RARE & ENDANGERED PLANTS.

16 June, Sat. Field trip to PACIFIC CREST TRAIL near PILOT ROCK. This all day trip will show us what is out. Vern Crawford, 482-9196, will lead this moderate hike. Bring lunch; meet at Ashland Bi-Mart at 8:30 a.m.

23 June, Sat. Field trip to NEIL CREEK. This annual trek is always rewarding. Gordon Larum, 772-1685, will lead this all day hike. Meet at Medford K-Mart at 8:00 a.m.; Ashland Bi-Mart at 8:30 a.m.

1 July, Sun. Field trip to STEVE FORK MEADOW; an all day hike which will include botanizing around Steve Fork Meadow near Miller Lake. Andy Kier, 482-9403, will lead. Bring lunch; meet at Ashland Bi-Mart at 8:00 a.m., Medford K-Mart 8:30 a.m., Jacksonville Van Ways Market at 9:00 a.m.

4 July, Wed. Annual LITHIA PARK FLOWER SHOW, Ashland.

8 July, Sun. Field trip to CHERRY CREEK PROPOSED RNA. This old glacial valley on the E side of the Cascades at 4800 ft. elev. is a candidate for USFS Research Natural Area status, and is included in the proposed Sky Lakes Wilderness. This all day trip includes 6 mi. of gentle-grade hiking. Bring lunch; Ashland people contact Wayne Rolle, 482-0093. Meet in Medford at Sherm's Thunderbird Market, Biddle Rd. at 8:30 a.m., junction of Cherry Cr. Rd. #3450 & Rock Flat-Ft. Klamath Rd. at 9:30 a.m.

Willamette Valley

9 June, Sat. Field trip to HORSE ROCK RIDGE with Alan Curtis, BLM biologist. Carpool from S Salem K-Mart, 7:30 a.m. Leader: Clint Urey, 743-2802.

16 June, Sat. BRUNO MEADOWS, Carpool from S Salem K-Mart, 7:30 a.m. Leader: Frances Schaefer, 393-7492.

24 June, Sun. DRIFT CREEK, COAST RANGE. Carpool from S Salem K-Mart, 7:30 a.m. Leader: Clint Urey, 743-2802.

30 June, Sat. BATTLE AXE MOUNTAIN. Carpool from S Salem K-Mart, 7:30 a.m. Leader: George Schoppert, 859-2613.

7 July, Sat. CRESCENT MOUNTAIN. Carpool from S Salem K-Mart, 7:30 a.m. Leader: Frances Schaefer, 393-7492.

BLM SEEKS VOLUNTEER WORKERS

The Bureau of Land Management relies on volunteers to accomplish some tasks that otherwise might not be completed and the federal agency seeks more such volunteers for summer and year-long work, according to Juan Martinez who coordinates volunteer activities for BLM in Oregon and Washington. Martinez says that 219 volunteers contributed 48,610 hours of work to the organization last year providing benefits worth $200,458 at a cost to the federal government of $41,297. This outlay covered such items as transportation and supplies.

Included among the volunteer skills BLM is seeking are: archaeology, botany, campground host, construction and maintenance, fish and wildlife, minerals and geology, natural resource planning, office and clerical, range, soil and watershed, timber, fire prevention, trail and campground work, visitor information, land surveying, heavy equipment operations, and many others.

GARDEN WITH NATIVE SHRUBS

A program on USING NATIVE SHRUBS IN YOUR YARD OR GARDEN, by Doris & Stanley Jewett, will be offered by the Leach Garden on Wednesday, June 20, at 7:30 p.m. There is no admission charge. The Leach Garden is located at 6704 SE 122nd Ave., Portland; phone 761-9503 for more information.

HAWAII NEXT IN TRAVEL SERIES

HAWAII: Hiking & Camping in the Islands is the title of the next WISTEC travelogue lecture & slide presentation by Gail A. Baker. The program will explore the wilderness attractions of the Hawaiian Islands, including Haleakala Nat. Park, home of the silversword; a seabird refuge on Kauai; & the Kipukas among the lava flows on the Big Island; on Tuesday, July 10, 7 p.m., Willamette Science & Technology Center (WISTEC), 2300 Centennial Blvd., Eugene, OR. Admission is $2.00 for adults, $1.00 college students & seniors, .75 for children.

The WISTEC Travelogue series will resume in the autumn with presentations on September 25 (AUSTRALIA), October 23 (BAJA & THE SOUTHWEST DESERTS), & November 13 (GUATEMALA & SOUTHERN MEXICO).

GARDEN VOLUNTEERS NEEDED

Volunteers are needed to pick up branches, pull weeds, & add new plants & flowers at Leach Botanical Park. Garden work takes place every Saturday; begins at 10:00 a.m. & runs through the day. Interested persons may come at their convenience. This is a great opportunity to work with experienced gardeners & landscapers, picking up ideas for home gardening. For more information, call Bonnie Brunkow at Leach Botanical Park, 761-9503.

Park hours for spring & summer are:
Office 10:00 a.m. - 4:00 p.m.
Grounds Dawn to Dusk

Flower show ethics questioned

The following is a slightly edited version of a letter written to NPSO President Rhoda Love by Vice-President-elect Michael D. Fahey in March, 1984:

I feel that the Native Plant Society of Oregon has a problem with regard to credibility as a group dedicated to conservation. We support and produce flower shows. One example would be the flower show in Eugene at the time of the annual meeting last year; this show was not presented by the Native Plant Society, but was sanctioned by being placed on the program. The show contained several plants that should not be picked or moved--i.e. *Calypso bulbosa, Darlingtonia*, and a plant described as very rare by Herm Fitz in his after dinner speech, *Microcala quadrangularis*.

We also produce shows in Portland, Salem (Silver Creek), Mid Columbia, Ashland, etc... I have not had much experience in visiting flower shows, but do wonder about their effect on NPSO's reputation.

I also reviewed our 1978 Code of Ethics, Sections 7 and 8 of part two deal with collection of plants. These sections permit a lot of discretion in what is and what is not acceptable. Section 8 is particularly vague; for example "collecting must never endanger a plant population". It would be desirable to define conditions under which a plant population is endangered. Reference is also made to rules of thumb for collecting--what is a rule of thumb for collecting? Perhaps section 7 has the most important statement--and one that could apply to some members of NPSO--"Casual observers may not understand the reasons for collecting and may feel license to do likewise". This would apply to those who feel that we must show rare plants in flower shows!!

The NPSO Code of Ethics also suggests the use of weeds, garden species, or lab-grown specimens for educational purposes. A Devil's advocate might question the values assigned to the different classes of plants by this choice of educational material. How does one arbitrarily state that some plants are good and some are bad?

I believe that the Native Plant Society of Oregon must take a close look at itself if we, as members, are to improve its credibility as a group dedicated to conservation.

Very Truly Yours,

M.D. Fahey
215 Phoenix Way
Vancouver, WA 98661

I hope that NPSO chapters which sponsor flower shows will discuss Michael Fahey's letter. Should we stop sponsoring flower shows? What arguments can be made in favor of flower shows? Do we need to tighten our Code of Ethics? Please send your responses to the Bulletin. I believe this is a subject that needs discussion within our society.

- Rhoda Love
NPSO Board Member

* * * * * *IMPORTANT ADDRESSES* * * * * *

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.
Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.
Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.
Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.
Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.
Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.
Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.
Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.
William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.
Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

* *

DOROTHY MARSHALL
Dec. 27, 1892 - April 21, 1984

Dorothy was a charter member of NPSO, a native Oregonian, active in many groups concerned with conservation and horticulture. Few had such long and loving acquaintance with the mountains, where she climbed and camped and botanized in her youth and later with her husband, the late Earl Marshall.

She had a wonderful garden of her own, and in recent years made significant donations from it to the Leach Botanical Park, Berry Botanic Garden, and the Cascades Exhibit at Washington Park Zoo. Her generosity--with plants and knowledge and friendship--is warmly remembered.

One recollection, of many her friends are exchanging, is of the NPSO field trip to Monument Peak ten years ago, when she joined us at Gates. All the way to the top she pointed out landmarks from the times she had been there on horseback, and guided us to the logging site where splendid color variations of *Iris tenax* grew. End of the day, she was heading up the road to Elkhorn to see how the flowers were doing.

Louise Godfrey
Portland Chapter

Conservation Alert

March 12, 1984

William G. Leavell, State Director
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

Dear Mr. Leavell:

The Native Plant Society of Oregon with about 700 members throughout Oregon is very concerned about the loss of BLM botanists in eastern Oregon and the fate of Oregon rare plants on BLM land in the eastern part of our state.

Nancy Felix has been gone for some time and has not been replaced and Virginia Crosby is leaving this week and there are no definite plans at this time for her to be replaced.

We cannot have populations of the hundreds of rare, threatened, and endangered species on the vast BLM-managed acres in eastern Oregon unprotected. Populations need to be monitored. We wish to make a strong recommendation that you appoint botanists to your Vale and Lakeview offices immediately, so that surveying and monitoring of populations can be done during this field season.

I also wish to lodge a strong complaint about the lack of care and monitoring of Stephanomeria malheurensis, the Malheur wire-lettuce. With no botanist on the east side, this plant is not receiving the attention required by Federal law. Oregon has only three species on the Federally protected R & E list at the present time, and S. malheurensis may well be the most endangered. The NPSO would like to receive assurance from you that steps are being taken to monitor and protect this rare species

Yours sincerely,

Dr. Rhoda M. Love, President
Native Plant Society of Oregon
393 FulVue Drive
Eugene, OR 97405 345-6241

Copies: Senator Hatfield, Senator Packwood,
Faith Campbell, NRDC
Jimmy Kagan, TNC; Kelly Smith, Sierra Club

March 16, 1984

William C. Leavell, Director
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208

Dear Mr. Leavell:

I am writing you as a concerned member of the High Desert Chapter of the Native Plant Society of Oregon. In the last 2 years we have seen at least 3 excellent botanists who work for the BLM in Eastern Oregon leave. I include in this number, Nancy Felix, Virginia Crosby, and Carolyn Wright. To my knowledge there has been no attempt to replace these people with equally competent botanists.

For quite some time those of us in Eastern Oregon were quite pleased with the BLM's efforts to protect the native plants of our area. In many ways you seemed to be doing a better job than the Forest Service in accomplishing this. However recently this no longer seems to be the case. It would seem that in these times of increasing criticism of grazing practices and emphasis on commodity values this is a step backwards.

As an example of the potential harm that may be done, last summer I went to view the Stephanomeria malheurensis in Harney County. As you know, this is the only community of this plant known in the entire world and it is one of only 3 species of the federally protected list in Oregon. Not only could I not find anybody in the Burns office who know where it was, they had no idea of what condition it is in or when I might find it in bloom. This situation is of great concern to me.

I will look forward to your reply.

Sincerely,

Stuart G. Garrett, M.D., A.B.F.P.

cc: Senator Mark Hatfield, U.S. Senate
Senator Bob Packwood, U.S. Senate
Representative Bob Smith, U.S. House of Representatives
Dr. Rhoda Love, President, Native Plant Society of Oregon

NPSO members--please write to Mr. Leavell to express your concern about the loss of botanical expertise in BLM offices east of the Cascades. Those in the know assure us that BLM officials are very sensitive to criticism of the agency's handling of botanical resources. We are in a good position to push for change.

- JK

June 16-17

COLUMBIA GORGE APPRECIATION WEEKEND

Haven't you always wanted to explore the Columbia Gorge hiking trails with an expert? Your chance is coming up on June 16 & 17 as Friends of the Columbia Gorge sponsor the 4th annual Columbia River Gorge Appreciation Weekend. 43 different outings are offered this weekend for almost any level of ambition--a walk to see the Indian rock paintings at Horsethief Lake State Park, a strenuous run up Eagle Creek Trail, or a beautiful hike up Dog Mountain at the peak of the wildflower season. Whatever suits your mood, it will be offered this weekend.

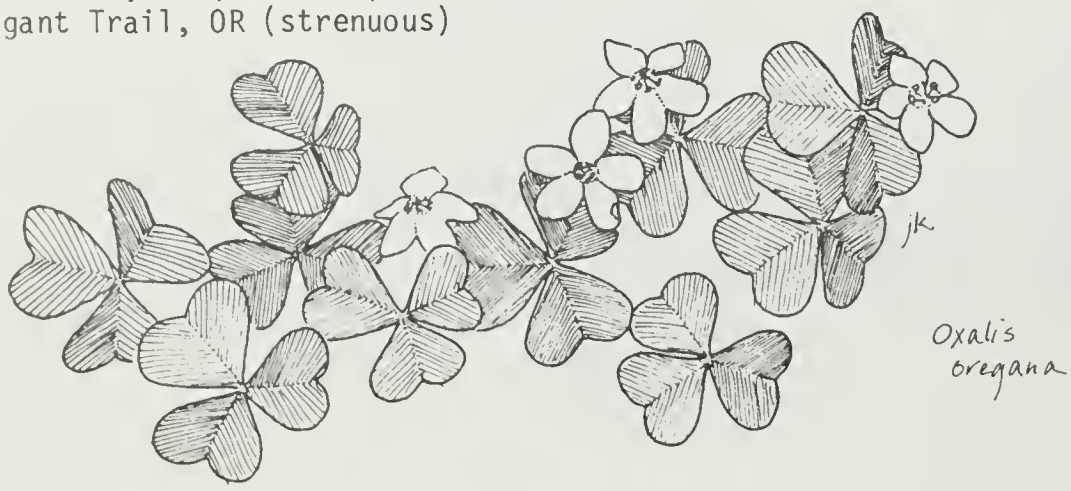
NPSO is a sponsor of Columbia Gorge Appreciation Weekend, & the Portland Chapter is leading several field trips in the Gorge; see this month's Chapter schedule for information about these trips. Other trips are being led by the American Alpine Club, Audubon Society, Historic Preservation League of Oregon, Sierra Club, U.S.F.S., Vancouver Parks & Rec. Dept., among others. For complete information about the trips listed below, call Friends of the Columbia Gorge, 503 241-3762.

SATURDAY, JUNE 16

Beacon Rock, WA (easy)
Columbia Gorge Scenic Hwy. (bike)
Devil's Rest, OR (moderate)
Dog Mtn., WA (strenuous)
Eagle Creek, OR (strenuous)
Eagle Creek-Wahtum Lake, OR (strenuous--run!)
Grassy Knoll, WA (easy)
Hamilton Mtn., WA (strenuous)
Herman Cr. Trail (moderate)
Horsetail Falls-Oneonta Loop, OR (easy)
Indian Point Loop, OR (strenuous)
Larch Mtn., OR (strenuous)
Larch Mtn.-Oneonta Loop, OR (strenuous)
McCord Creek Falls, OR (easy)
Mt. Defiance, OR (strenuous)
Nesika Lodge, OR (moderate)
Nesmith Pt., OR (strenuous)
Ruckel Creek Trail, OR (strenuous)
Ruckel Ridge-Ruckel Creek Loop (strenuous)
Silver Star Mtn., WA (stren.)
Table Mtn., WA (strenuous)
Wahkeena-Multnomah Falls Loop, OR (moderate)
Wauna Point, OR (moderate)
Wind Mtn., WA (moderate)
Wygant Trail, OR (strenuous)

SUNDAY, JUNE 17

Angels Rest-Wahkeena Falls, OR (moderate)
Dog Mtn., WA (strenuous)
Eagle Cr., OR (moderate)
Eagle Cr.-Camp Smokey-Rudolph Spur Loop, OR (strenuous)
Grassy Knoll & Big Huckleberry, WA (mod.)
Hamilton Mtn., WA (stren.)
Horsetail Falls-Triple Falls, OR (easy)
Horsethief Butte Petroglyph Walk, WA (easy)
Multnomah-Franklin Ridge Loop, OR (moderate)
Nesmith Pt., OR (stren.)
Oneonta Gorge Loop, OR (easy)
Silver Star Mtn., WA (strenuous)
Starvation Cr. Park-Warren Cr. & Perham Cr., OR (moderate)
Table Mtn., WA (stren.)
Tanner Butte, OR (stren.)
Wahtum Lake, OR (strenuous--run!)
Wind Mtn. & Grassy Knoll, WA (moderate)
Wygant-Chetwood Loop, OR (moderate)



DARLINGTONIA SALE BANNED

Darlingtonia will no longer be sold at Eugene's Saturday Market, following correspondence between NPSO Board member Rhoda Love and Saturday Market Administrative Assistant Patt Ayers. The ban of Darlingtonia sales had already been planned, according to Ayers, who noted that "No one had even tried to sell the plant until last year, so it was something new for us to deal with".

HUGE POPULATIONS OF *ERYTHRONIUM REVOLUTUM* FOUND ON PIONEER MOUNTAIN

Paul Hammond and David McCorkle observed what may be the largest populations of the coast fawn lily *(Erythronium revolutum)* in the state of Oregon. These populations were in full bloom during the first two weeks of April, 1984, on the highest ridges of Pioneer Mountain summit south of the U.S. Hwy. 20 road cut about 3-4 miles east of Toledo in Lincoln County. Covering several square miles, these ridges were clear-cut several years ago, and are still fairly open and clear with only recently planted young trees. Thousands of *E. revolutum* cover these hillsides, in some places almost as dense as *E. montanum* on Mt. Rainier. Full exposure to sun in these clear-cuts has apparently triggered the plants into bloom, since those in the deep shade of surrounding unlogged forests are mostly small, non-flowering plants. For those interested in observing this species in huge numbers, this site will offer a spectacular display in early April for the next 3-4 years, at least until the brush and trees again grow up and shade the lilies out.

Welcome, New Members

EMERALD CHAPTER
Wendell Wood

HIGH DESERT CHAPTER
Barbara S. Sharp
Don Tryon
Bobbi Meritt

MID-COLUMBIA CHAPTER
Krista Thie
Nadine Eccles

PORTLAND CHAPTER
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John Kistler
Kay Copenhaver

SISKIYOU CHAPTER
Charles & Barbara Bean

WILLAMETTE VALLEY CHAPTER
Pat Rogers-Rochna
Mickey McClure

PLANT FAMILY PROFILES by Herm Fitz

A single flower of Clustered Broomrape (*Orobanche fasciculata*). Note the bilabiate corolla as found in Scrophulariaceae, and two of the four didynamous stamens. The flower is subtended by a bractlike leaf.

The Orobanchaceae - BROOMRAPE FAMILY

The Orobanchaceae is a small family of annual or perennial herbs that are total parasites attaching to the roots of other plants. They are mostly lacking in chlorophyll and appear in various non-green colors. Although about 180 species in 14 genera are distributed chiefly in north temperate Eurasia, elsewhere in the world they are not well represented - there are few tropical or American species. The United States is home for four genera, and only two of these occur in Oregon: Broomrapes (*Orobanche*) and Ground Cone (*Boschniakia hookeri*). The Broomrapes, with about 140 species worldwide (the great majority of the family), have seven representatives spread here and there in Oregon. Pine Broomrape (*O. pinorum*) occurs sparsely throughout the state and is said to be "parasitic on various conifers" in the floras. This is an error - as was pointed out to me several years ago by Dr. Ken Chambers of OSU, who told me that it actually is a parasite on Ocean Spray (*Holodiscus discolor*)! Indeed, this important tip allowed me to locate the plant (just once in all my years of searching) well-hidden among the bases of the stems of a shrub of Ocean Spray near Jumpoff Joe in the South Santiam. I would not ordinarily have been looking so carefully there! Now I glance at the base of each Ocean Spray I encounter, hoping someday to find it again. I also think perhaps its name should be changed to *O. holodiscorum*, or something. Clustered Broomrape (*O. fasciculata*), with yellowish flowers, is less host-specific; it may choose from a wide variety of host plants. I have seen this plant only once, near Quaking Aspen Swamp in the McKenzie Drainage several years ago. Naked Broomrape (*O. uniflora*), with purplish-violet corolla, is perhaps the most common in western Oregon, found often on low-to-medium elevation outcrops in the Western Cascades - parasitic on many species, but particularly *Sedum*, or various saxifrages or composites. I still recall vividly my first encounter with this beautiful little dwarf - on Echo Mountain - and I always get a thrill when I see one, or many, as I did one year on Eagle's Rest. California Broomrape (*O. californica*) prefers the east side of the Cascades, and can be found parasitizing Big Sagebrush (*Artemisia tridentata*) in its range. Two years ago, while drifting 72 miles of the John Day River below Clarno Bridge in late June, members of our party found several specimens in moist sand near the river. Stout Broom Rape (*O. grayana*), on both sides of the cascades, seems to like Compositae; *O. ludoviciana*, again of the eastern part of the state, takes a variety of hosts, but is often on Big Sage and other Compositae. Clover Broomrape (*O. minor*) is introduced from Europe, and prefers Leguminosae and Compositae, especially clover in cultivated fields, where it can become a serious crop pest. The Ground Cone (*Boschniakia hookeri*) occurs in the coniferous woods of coastal mountains from California to Washington, and is parasitic on various members of Ericaceae.

Members of this family are rooted, but have no extensive root system; instead, either a congested mass of short, thick roots is found, or a large, single complex swollen organ. The underground structure connects at one or more points via penetrating haustoria to the root of the host plant, which supplies virtually all the nourishment to the parasite. Above ground, a stem, usually single and erect, bears scale-like brownish leaves, and terminates in the flowering spike or raceme. Flowers are essentially similar to those of the typical bilabiate Scrophulariaceae (see February, 1980, NPSO newsletter). In fact, the Orobanchaceae appears to be a wholly parasitic offshoot from the Scrophulariaceae and differs from that family only in its nutritional habit. Thus, the flowers are irregular, ± bilabiate, and bisexual. Two-to-five sepals fuse to form a two-to-five toothed calyx. The corolla, of five fused petals, bears two lobes in the upper lip and three in the lower lip (just like a monkeyflower!). The stamens are didynamous - i.e., two long and two short, although a staminode (vestigial 5th stamen - only a filament, as in *Penstemon*!) may be present. The superior ovary is of two united carpels (rarely 3) with a single locule, with four parietal placentae, each bearing numerous ovules. The style is single, with a 2-4 lobed stigma. The resulting capsule splits along two sutures and releases small, very numerous seeds, which are effectively dispersed by the wind.

The floral formula may be written:

$$Ca^{\overset{\smile}{2-5}}\ Co_z^{\circledast 5}\ S^{2+2}\ P^{(2)}$$ with a

superior ovary. This is the same formula that we find in the Scrophulariaceae. So, when you encounter a red, brown, purple, or whitish herbaceous root parasite with scroph-like flowers, you will know surely that you have found one of our eight delightfully intriguing members of the Orobanchaceae - the Broomrape Family.

R/E News

June is the month to look for the rare Sidalcea on the Oregon R/E list. Of these, Sidalcea setosa ssp. querceta, is the next in our series of plants described in the literature, but not yet included in the floras. It was published along with Sidalcea setosa ssp. setosa in Hitchcock, C. Leo and A.R. Kruckeberg. (1957). A study of the perennial species of Sidalcea. Univ. of Wash. Press, Seattle. Descriptions of both are included here, as neither is in Oregon floras.

SIDALCEA SETOSA ssp. SETOSA C.L. Hitchc.

Perennial with a thick heavy root and very short rootstocks; stems 5-10 dm. tall, pubescent at base with a mixture of fine, soft, appressed stellae and some longer simple or forked hairs, or hirsute or stellate only, finely soft-stellate above; leaves stellate on both surfaces of the blades, the basal numerous, long-petioled, the blades 5-10 cm. broad, very shallowly 5- to 9-lobed and coarsely crenate to crenate-dentate, the middle cauline 7- to 9-lobed, the lobes cuneate-obovate, coarsely toothed, upper leaves and bracts divided into 5-9 entire to laciniate segments; stipules linear-lanceolate, 5-15 mm. long, entire to bilobed; inflorescence usually compound, the racemes spikelike, tightly many-flowered, mostly 3-7cm. long; bractlets linear, about equal to the calyx; pedicels mostly 1-2 (in fruit as much as 4) mm. long; calyx 5-8 mm. long, accrescent and as much as 10 mm. long in fruit, lobed 2/3 of the length, finely stellate but conspicuously bristly with longer and coarser bifurcate to stellate, usually pustulose hairs of several lengths, lobes ovate-lanceolate, acuminate, ciliate with forked and 4-rayed hairs; petals pinkish-lavender, 5-15 mm. long; carpels about 2.5 mm. long, very sparsely glandular-puberulent and lightly reticulate on back, the margins acute, the sides fairly distinctly reticulate-alveolate, beak about 0.5 mm. long.

Type: Cusick 4796, June 19, 1915, Grants Pass, Josephine Co., Oreg. (WSU)

S. setosa is found in a rather limited area of s.w. Oreg. and n.w. Calif. It has previously gone under the herbarium names of S. spicata, cusickii, campestris or oregana...Peck identified several of his own collections as S. cusickii, [but] apparently followed Roush in assigning the plant to S. spicata.

...A population at Oak Flat Meadows, 4 mi. s. of Agness, Curry Co., Oreg., differs slightly from the material seen from Josephine Co. in that it has somewhat less stellate but more coarsely hirsute lower stems and smaller calyxes, with fewer, longer, finer hairs mixed with the stellae. These plants are nearly intermediate between S. setosa (as it occurs in Josephine Co.) and S. cusickii, but the population is uniform in nature, and it is believed to represent a distinctive phase of S. setosa, the two races being separable as follows:

1 Calyx at anthesis usually 6-8 mm. long, conspicuously bristly with long, simple or forked hairs; basal portion of the stems finely soft-stellate and sometimes also with longer, spreading, simple to cruciate hairs; plants short-rhizomatous ssp. setosa

1 Calyx at anthesis usually 4-6 mm. long, more conspicuously finely stellate than bristly, the longer hairs few, slender; basal portion of the stems chiefly with short bifurcate to cruciate, spreading hairs; rhizomes lacking or very poorly developed ssp. querceta

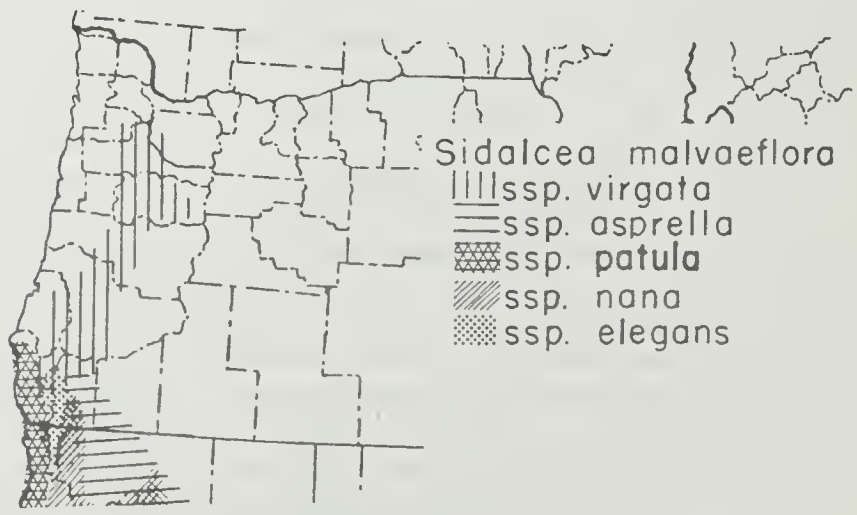
SIDALCEA SETOSA ssp. QUERCETA C.L. Hitchc.

Plant with little or no development of rootstocks, the stems rather finely hairy at base with simple, forked, and cruciate hairs; calyx 4-6 mm. long at anthesis, finely stellate and sparsely hirsute with longer, slender, forked to 4-rayed hairs.

Type: Along small stream at s. end of Oak Flat Meadows, about 4 mi. s. of Agness, above Illinois R., Curry Co., Oreg., June 30, 1953, C.L. Hitchcock 19902 (U. of Wash.)

A word might also be said about the Sidalcea malvaeflora group, as searching for these taxa in the floras can be almost as confusing as the group itself. In his monograph mentioned above, Dr. Hitchcock (1957) listed five ssp. of S. malvaeflora in Oregon: virgata, asprella, patula, nana and elegans. Peck (1961) included patula and elegans as ssp. of malvaeflora, omitted nana, and treated asprella and virgata as species. Munz (1959) listed asprella, patula, nana and elegans all as ssp. of malvaeflora. (Virgata does not occur in California.) In Abrams, published in 1951 before Dr. Hitchcock's revision of the genus, asprella and virgata are treated as species, elegans is a synonym of S. asprella, nana is a var. of S. reptans, and patula is omitted. In Hitchcock and Cronquist (1973), virgata is again a species; none of the others are included as they all occur in southern Oregon. Incidentally, S. virgata looks like a small, pale S. campestris. These two Willamette Valley species are often confused, and some of our sites for S. campestris may be S. virgata.

A word might also be said about the Sidalcea malvaeflora group, as searching the flora for these taxa can be almost as confusing as the group itself. In his monograph, mentioned above, Dr. Hitchcock (1957) listed five sspp. of S. malvaeflora in Oregon: virgata, asprella, patula, nana and elegans. The following is the Oregon portion of his distribution map.



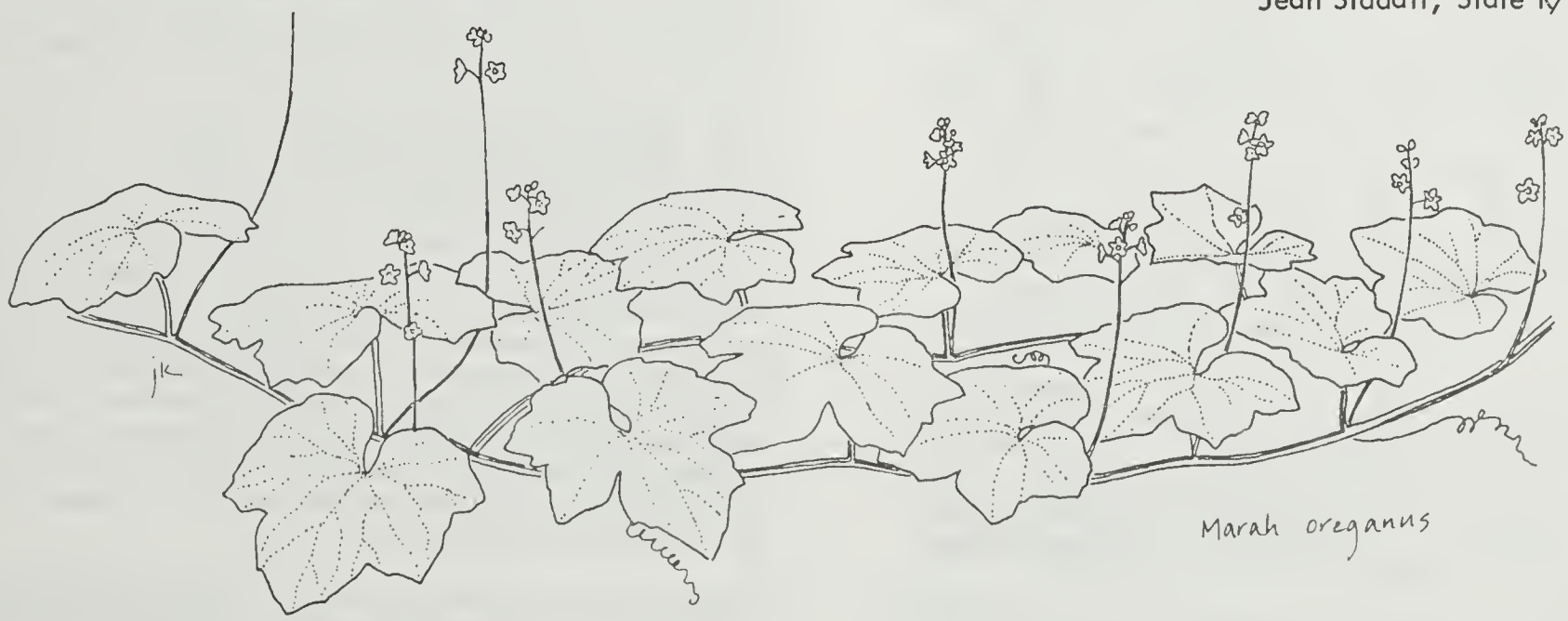
Peck (1961) included patula and elegans as ssp. of malvaeflora, omitted nana, and treated asprella and virgata as species. Munz (1959) listed asprella, patula, nana and elegans as ssp. of malvaeflora, but omitted virgata as it does not occur in California. In Abrams, published in 1951 before Dr. Hitchcock's revision of the genus, asprella and virgata are treated as species, elegans is a synonym of S. asprella, nana is a var.of S. reptans, and patula is omitted. In Hitchcock and Cronquist (1973), virgata is again a species. None of the others are included as they are all southern Oregan taxa. Incidentally, S. virgata looks like a small, pale S. campestris. These two Willamette Valley species are often confused. Some of our S. campestris reports may well be S. virgata.

Perhaps a chart for all the Sidalcea on the Oregon list will be helpful.

SIDALCEA	Peck	Munz	Hitchc. et al.	H&C	Abrams	Blooming time	Area of Oregon
S. campestris	516	-	3:426	293	III:106	May-July	Willamette V.
S. cusickii	517	-	3:426	294	(S. oregana var. cusickii) III:103	May-June	s.Willamette, Umpqua, Coquille Vs. (? Cascades)
S. hendersonii	516	-	3:428	293	III:103	June-Aug	n.coast
S. hirtipes	516	-	3:428	294	-	June-July	coastal bluffs; Coast Range
S. malachroides	519	136	-	-	III:106	June	sw Curry Co.
S. malvaeflora							
ssp. elegans	517	134	-	-	(S. asprella) III:103	June-July	Josephine Co.
ssp. nana	-	134	-	-	(S. reptans var.nana) III:103	June-July	Jos.-Jackson Cos.
ssp. patula	517	134	-	-	-	June	coast, Curry Co.
S. nelsoniana	517	-	3:428	293	-	May-July	Willamette V.
S. setosa							
ssp. querceta	-	-	-	-	-	June ?	Curry Co.
ssp. setosa	-	135	-	-	-	June-July	sw Oregon

In researching the literature for this article, I realized there was another Sidalcea which appears to be very local in Oregon. Sidalcea neomexicana ssp. crenulata (Peck p. 519; H&C p. 293) occurs only in the lower Burnt River and Powder River areas of Baker Co. in Oregon, according to Dr. Hitchcock's map, although its range extends to Utah and Nev. Peck (p.518) also lists S. multifida, s.w. Lake Co., and S. valida, s. Klamath Co. What do we know of these taxa? Should they be considered for addition to the Review List. Let me hear from you.

Jean Siddall, State R/E Chair



ARABIS IN SOUTHWESTERN OREGON

II. Arabis & Species Concepts

Linda Ann Vorobik, Emerald Chapter

My doctoral research at the University of Oregon focused on hybridization and its converse, reproductive isolation, among sympatric species of *Arabis* (rockcress). Hybridization is interbreeding of populations or species; reproductive isolation is the absence of interbreeding between populations or species. Both hybridization and reproductive isolation focus on the boundaries between species rather than on individual species. Before studying the interaction between two species, one must first understand what, exactly, a species is. Is it a number of populations whose individual members look more like one another than individuals of another species? This is the basis of the old-fashioned concept of species, called typological species concept. It works because related organisms tend to look alike (through heredity, or passing on of genes). Each species today is described and exemplified by a nomenclatural type specimen, which is used as a reference for the original description of the species; but biologists realize that the form of the type may not represent the most prevalent or "typical" form of that species in nature.

A more advanced definition of species is the biological species concept. Here a species is defined as the reproductively isolated system of breeding populations. In a field population of *Arabis aculeolata*, for example, the plants interbreed, via bees which visit a number of plants in a row and transfer pollen from flower to flower. Because of inheritance, offspring look like parents, and the plants of one breeding population look alike. The typological species concept in this example is not contradicted by the biological species concept. But what of two populations that, because of appearance, "belong" to the same species but are geographically separated and therefore do not interbreed? For example, *A. aculeolata* at Rough & Ready Creek is geographically isolated from *A. aculeolata* at Eight Dollar Mountain. Bees cannot fly from one population to the other, and the two populations do not interbreed. Does this mean that *A. aculeolata* "Eight Dollar Mountain" is a separate species from *A. aculeolata* "Rough & Ready Creek"? By examining the similarity of form between plants of the two populations, our common sense would answer NO! Not only are plants from the two populations almost identical in appearance, but they are cross-compatible; that is, artificial pollinations result in healthy and fertile offspring. An improved biological species concept is, then, a reproductively isolated system of actually or potentially breeding populations.

Most of us are happy to understand a species based on what the organisms look like; a few people are interested in what the biological bases of appearances are, enough to think about and accept the biological species concept. Unfortunately, even the revised biological species definition does not work well for plants, as the following example will illustrate.

Arabis oregana is a species which grows in the Cascade foothills from Roxy Ann Peak east of Medford, south into California on the Klamath River. Its populations are geographically isolated from populations of *A. aculeolata*, which occurs in the Illinois River Valley south of Grants Pass on serpentine. In form, the two species differ most markedly with respect to the size, shape, texture, and hair types of the basal leaves. Ecologically, the two species are adapted to two, chemically very different, soil types. However, the species can be crossed in a greenhouse with ease.* The biological species concept would lump *A. oregana* and *A. aculeolata* into one large, dimorphic species. Species pairs which hybridize, naturally or artificially, would be lumped together by the biological species concept. Our understanding of species would be especially impaired in groups where hybridization is common, such as in paintbrushes, oaks, or columbine (*Castilleja*, *Quercus*, and *Aquilegia* respectively).

Because natural hybridization is especially common in plants, the botanist needs a definition of species

which includes:

1) differences in form between populations & species (morphological or phenotypic differences)
2) the breeding biology of the populations & species, and
3) the evolutionary history of the populations & species; which explains cross-compatibility between similar but otherwise isolated populations, and cross-compatibility between morphologically distinct species growing together (hybridization)

The typological species concept satisfies 1); the biological species concept satisfies both 1) & 2). To satisfy all three requirements, Simpson in 1961 defined the evolutionary species concept. An evolutionary species:

1) is a lineage, an ancestral-descendent sequence of populations existing in space and time

2) is a lineage which evolves separately from other lineages, or, in other words, from other species

3) has its own "unitary evolutionary role"; that is, it fits into its own particular niche in a biotic community, and

4) has its own evolutionary tendencies, being susceptible to change in evolutionary role during the course of its history (from Grant, 1970)

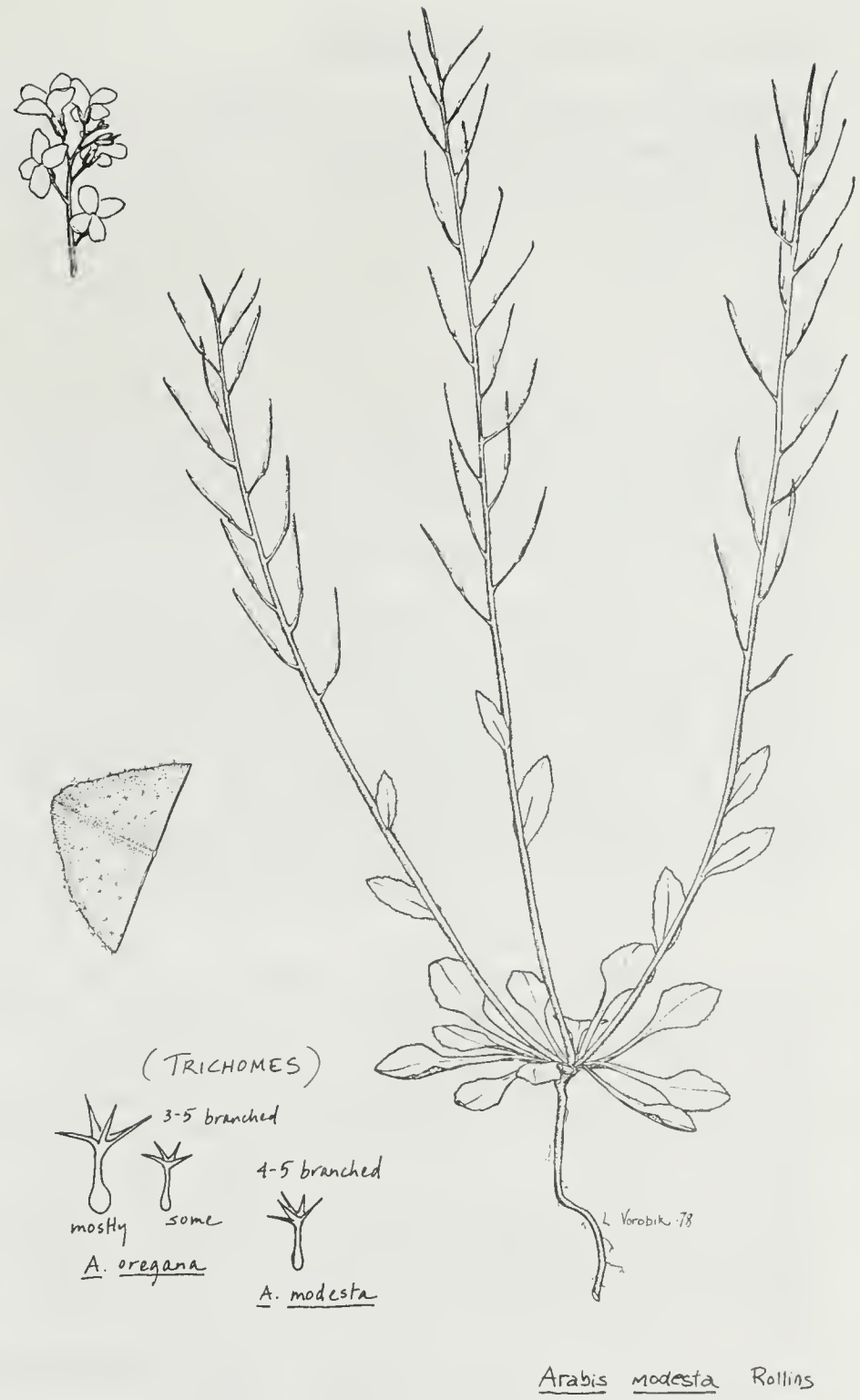
By using this definition, we can view hybridization between species, or complete cross-compatibility between species, as incidental to status as species if the unitary evolutionary role of the species is not destroyed. Even with an interface of hybridization, it is possible for two parent species to remain distinct if they either do not hybridize throughout their ranges, or if the parent species retain their unique ecological niches.

In the case of *A. oregana* and *A. aculeolata*, cross-compatibility does not merge the two species into one, because the species are reproductively isolated in nature and thus retain their different ecological niches and evolutionary roles.

Hybridization in *Arabis* has been discussed by Reed Rollins (a foremost authority) several times. Although Dr. Rollins discussed the species biology and evolutionary roles in his monograph of *Arabis*, I wanted to better understand what was happening in the field with the *Arabis* I had encountered. This was especially interesting to me because the potential for hybridization was so great in sites of overlapping *Arabis* populations. These sites provided me with the perfect opportunity to study the interaction between *Arabis* species, and thus the species themselves. In Part III of this series I will share the results of my studies.

For further reading:

Grant, Verne. 1971. *Plant Speciation.* Columbia Univ. Press, 435 pp. (Especially chapters 2, 3, 6, and 11)



Arabis modesta, a species closely related to *A. oregana* (in fact, Duane Goforth considers them to be a single species, *A. oregana*). Leaf shape in both species is very similar. *A. oregana* tends to have more, & shorter, flowering stems; and the trichomes (hairs) of *A. oregana* are larger & bulbous-based.

Mayr, Ernst. 1970. *Populations, Species, and Evolution.* The Belknap Press of Harvard Univ., Cambridge, MA, 453 pp. (Especially chapters 2-6; mainly discusses animals)

*In both the crosses *A. aculeolata* "Eight Dollar Mtn." X *A. aculeolata* "Rough & Ready Creek" and *A. aculeolata* X *A. oregana*, fruits mature vigorously and seed set is high. Fertility of the offspring has not yet been determined (I'm waiting for the plants to grow) but I am making an educated guess that the hybrid progeny will be fertile. Even if my results prove otherwise, there are numerous other species of flowering plants which could be used to exemplify the points I am making about species concepts.

Deschutes trip enjoyed

On April 28 about 30 hardy NPSO members assembled in Tygh Valley on a cloudy, windy, winter-coat day for what turned out to be an excellent day of botanizing along the Deschutes River in Wasco and Sherman Counties. Our charming guides, Jean Hallgarth and Virginia Winegar, led us to Sherar's bridge and then north for about 10 miles along the Deschutes River Access Road, which closely follows the east bank of the river for 17 miles. It should be emphasized to our less mobile members that this road (a decent gravel one) gives easy access to an area of delightful botanizing that requires almost no walking to see the plants. I might add that this is also an area of gorgeous scenery--soaring rust-colored canyon walls and sage-covered hills.

Some of the most common trees and shrubs we saw were big sage (*Artemisia tridentata*); antelope bitterbrush (*Purshia tridentata*), much of it in bloom; netleaf hackberry (*Celtis reticulata*), abundantly in flower, which was new to most of us; and along the river white alder and water birch (*Alnus rhombifolia & Betula occidentalis*). An occasional splash of yellow erupted from the showy golden currant (*Ribes aureum*), and a few chokecherries were blooming (*Prunus virginiana*).

We were excited by a species of monkeyflower new to most of us: *Mimulus jungermannioides*, growing out of moist cracks in the rocks of vertical cliffs. Its leaves are densely gland-covered and exceedingly slimy to the touch. *Phlox longifolia* provided rich splashes of pink. At its absolutely most beautiful stage was alumroot (*Heuchera cylindrica*), an abundant cliff dweller. A few other species of note that were blooming were *Lomatium dissectum, Amsinckia intermedia, Astragalus* sp., *Myosurus minimus* in a wet area, *Sedum leibergii, Balsamorhiza careyana, Lupinus laxiflorus, Hydrophyllum capitatum,* and a single tiny plant of *Oenothera contorta* with only one flower out. In all our group logged about 60 species of plants in bloom.

Our trip ended at Cedar Island, near Beavertail Recreation Area, on which is a Great Blue Heron rookery and on which grows one of the most northerly stands of incense-cedar (*Calocedrus decurrens*) in Oregon. Just prior to this we had seen two Golden Eagles soaring among the high colorful cliffs.

Ken Vanderkamp
Portland Chapter

Jean Davis Award funds Mimulus work

During the 1983-84 academic year at Oregon State University I was privileged to have been financially assisted by the Jean Davis Memorial Scholarship. At the time of the award, I was entering my final year as a Master of Science degree candidate under the direction of Dr. Bob Frenkel in the OSU Department of Geography. My thesis research has involved the study of several species of the genus *Mimulus* (family Scrophulariaceae), commonly known as monkeyflowers. The title of my thesis is "The taxonomy, distribution, and reproductive ecology of the *Mimulus jungermannioides* complex in the Pacific Northwest."

The species of *Mimulus* which I have been studying are, for the most part, restricted in their geographical distributions to the Pacific Northwest. They include one perennial (*M. jungermannioides*), one annual which occasionally behaves as a perennial under favorable environmental conditions (*M. hymenophyllus*), and four annuals (*M. pulsiferae, M. patulus, M. washingtonensis* var. *washingtonensis,* and *M. washingtonensis* var. *ampliatus*). Each of these taxa is uncommon or rare, and several have been included at one time or another on one or more of the many Rare, Threatened, and Endangered plant lists which have proliferated in recent years. Additionally, I have studied to a lesser degree three species which are evolutionarily allied to my study group but which have taxonomic affinities to a number of other species as well, and are geographically distributed in much of the West. These are *Mimulus moschatus, M. floribundus,* and *M. breviflorus.*

My taxonomic investigations have resulted in the naming of one new species (*M. hymenophyllus*), one new taxonomic combination (*M. washingtonensis* var. *ampliatus*), and the rerecognition of a distinct species which was named by Pennell in 1947 and subsequently obscured through its placement in synonymy under *M. washingtonensis (M. patulus)*. Distributional studies have confirmed the restricted geographic ranges described for these species in the standard floristic manuals. Moreover, they have shown that many of the species are locally common but with very specific habitat requirements. Fortunately, with the possible exception of the habitats of *M. pulsiferae* (which, incidentally, is more common in northern California) and *M. washingtonensis* var. *ampliatus* (endemic to Idaho), human disturbance is very limited on these sites, which are often characterized by sheer basalt cliffs or crumbly, gravelly slopes usually shunned by livestock.

Perhaps the most important aspect in the study of native plant species, particularly the rare or threatened ones, revolves around the understanding of their biology. Why do they grow where they do, and, if apparently restricted to some specific habitat, what keeps them there? The *Mimulus jungermannioides* complex proved to be remarkably diverse in the reproductive strategies its members possess. *M. jungermannioides*, for example, very rarely successfully reproduces by seed, despite the fact it produces literally thousands of germinable seeds per plant each season. Its preferred habitat is on cliff faces where it apparently eludes the competition which would surely be exerted on it by other species of plants below. Rather then evolve the necessary rigor which would allow its seeds (which tumble to the ground after release) to compete in a moisture-unstable environment, it has opted for an unusual method of vegetative propagation on the vernally saturated cliffs, a generally predictable setting which is spring-fed. Plants produce long stolons in the autumn, which, after finding their way into dark fissures in the rock, grow succulent bud-like organs at their tips (called turions). These structures are rich in starch and remain protected over the winter in the cracks long after the maternal plants have been killed by the frosts of win-

ter. It is from these turions that plants grow anew in the spring. This form of "reproduction" is advantageous to the species in that it is a sure bet, so to speak, which assures its yearly reappearance. It is disadvantageous, however, in that populations are probably composed of little genetic diversity (because they reproduce asexually) and leave themselves open to potential catastrophe should they suddenly need to draw on a diverse gene pool to adapt to a changing environment. This may very well be why the species is so scattered and rare.

Mimulus hymenophyllus is another cliff-dweller which shows an inability to compete off of vertical basalt. It is primarily an annual, however, something I became fully aware of after I published its original description, and therefore cannot rely on overwintering vegetative structures. It has evolved a fascinating mode of seed dispersal in order to retain its cliff populations year after year. As soon as flowers are successfully pollinated, the pedicels, now bearing a developing capsule, become light-sensitive. These negatively phototropic pedicels all curve away from sunlight and into the darkest recess available to them on the face of the cliff, thereby maximizing their chances of depositing their seeds in a crevice. The seeds of *M. hymenophyllus*, unlike *M. jungermannioides*, are mostly dormant at maturity and must undergo a period of cold (provided by winter temperatures) before germination is possible. This mode of seed dispersal is similar to that described for the European *Cymbalaria muralis* (ivy-leaved toadflax), which has escaped at a few localities in western Oregon.

I hope to wrap up my present work on *Mimulus* in the next two or three months. From here, I plan on continuing my research by pursuing a Ph.D. degree with Dr. Ken Chambers in the Department of Botany at OSU, hopefully focusing on further taxonomic and ecological problems in the monkeyflowers. I am looking forward to continuing my work in this very interesting group of native plants.

In conclusion, I would like to emphasize the importance of programs like the Jean Davis Memorial Scholarship in helping graduate (and undergraduate) students achieve their goals in plant ecology and systematic botany. Scholarships providing assistance to students working on basic, non-applied research in the natural sciences are few and far between, and those individuals fortunate enough to receive such aid are very appreciative. For myself, the Jean Davis award meant I was able to finish my M.S. on schedule and ultimately be accepted to work on my doctorate this coming fall. I valued it not only as a monetary asset, but also as an expression of the worth placed by NPSO on the work of student researchers. Thanks are due to all who have contributed to the success of this scholarship program, especially to those outside of academic botany whose lay interest and appreciation of native plants is so very important.

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The NPSO Bulletin is published monthly by the Native Plant Society of Oregon, which is incorporated under the laws of the state of Oregon. All are welcome to join the Society. Membership applications, from the preceding page or provided by Chapter presidents, should be sent to: Mary Falconer, 1920 Engel Ave. NW, Salem, OR, 97304. Changes of address, including old address and zip code, should also be sent to Mary Falconer. Bulletin copy is due by the 10th of each month, and should be sent to the Editor, 11505 SW Summerville Ave., Portland, OR, 97219.

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Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 7 July 1984

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NEW YORK
BOTANICAL GARDEN

CHAPTER NEWS

Blue Mountain

7-8 July, Sat. - Sun. Field trip to WHITE CLOUD MTS. in the SAWTOOTH NAT. RECREATIONAL AREA, Idaho. Joe Duft will lead. For details, call Harry Oswald, 276-1241 (days).

21-22 July, Sat. - Sun. Field trip from JOSEPH TO DUCK LAKE, up Sheep Cr.; led by Rachel Sines. Meet at 10:00 a.m. in Joseph on Saturday. For details & meeting place, call Harry Oswald, 276-1241 (days).

Corvallis

--- No more chapter meetings until October

14 July, Sat. Field trip to wildflower meadows in the PROPOSED OLD CASCADES WILDERNESS. Contact Brian Heath, 752-6127.

21 July, Sat. Field trip to MARYS PEAK, W of Corvallis. Contact Esther McEvoy, 754-0893. All day trip.

Emerald

9 July, Mon. Workshop, 7:15 p.m., Rm. 33, Science II, U of O campus, kitty-corner from the Herbarium. Dave Wagner: HOW TO KNOW THE FERNS.

14 July, Sat. Field trip to WALDO COUNTRY: lakes of extreme purity; carnivorous & ancient plants. Meet at South Eugene High School parking lot, 19th & Patterson, 8 a.m. Leader: Leighton Ho, 345-3252.

23 July, Mon. Workshop, 7:15 p.m., Rm. 33, Science II (see 9 July). Herm Fitz: THE RIGHT WAY TO KEY PLANTS.

6 July, Mon. Workshop, 7:15 p.m., Rm. 33, Science II (see 9 July). Carol Cogswell: HOW TO PHOTOGRAPH PLANTS.

20 Aug., Mon. Workshop, 7:15 p.m., Rm. 33, Science II (tentative). Warren Pavlat: HOW TO KNOW THE GRASSES.

10 Sept., Mon. Meeting, 7:15 p.m., Rm. 33, Science II. Evelyn Hess: A TOUR OF THE UNIVERSITY GREENHOUSE.

High Desert

14 July, Sat. Hike to the top of BLACK BUTTE. A road goes part way up, then the remaining 2 mi. or so are covered on foot. 1500 ft. elev. change for the hike. Meet in back of McDonald's in Bend, 8:30 a.m. Carry water & lunch. Kathleen Cooper, 389-8203.

4 Aug., Sat. Hike in THREE CREEKS LAKE area. Meet in back of McDonald's in Bend, 8:30 a.m. Stu Garrett, 389-6981.

Mid Columbia

7 July, Sat. POTLUCK meeting at the home of Susan Kofahl, 2050 Mosier Cr. Rd. Welcome from 3-7 p.m. Call 478-3576 if directions are needed.

Portland

Our field trip meeting place is the K-Mart at NE 122nd & Sandy Blvd (exit I-84 at 122nd northbound & meet at the S end of parking lot). If you have any questions about any field trip, please call the leader or Doris Ashby, 245-2977.

7 July, Sat. Field trip on the BUCK PEAK TRAIL--a gentle 8 mile hike to see flowers in the Lolo Pass area. Meet at 8:00 a.m. at K-Mart. Leader: Doris Ashby, 245-2977.

10 July, Tues. Meeting, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson. EIGHT DOLLAR MOUNTAIN & FLOWERS OF SOUTHWESTERN OREGON, a program by Oregon Natural Resources Council, Wendell Wood, president. Plus some "show & tell" material--bring your hand lens.

14 July, Sat. Field trip to FALLS CREEK. Take a moderate stroll in a scenic area of the Gifford Pinchot Nat. Forest. Meet at K-Mart at 8:00 a.m. & then on to the N end of the Bridge of the Gods to meet leader Mike Fahey at 9:00 a.m. (206) 639-5076.

21 July, Sat. Field trip to DEER MEADOW. Come & explore the closest meadow & bog area near the Columbia River. This long & gently sloping region has no trails, so be prepared for wet ground. Wear waterproof boots or tennis shoes; bring other shoes to change into after the trip. Meet at the K-Mart at 8:00 a.m. or join the leader at "the store" in Skamania, WA at 9:00 a.m. Leader, Lois Kemp, 760-4998.

28 July, Sat. Field trip to the BALD BUTTE area to see the flowers, etc. S of Lolo Pass & on part of the Muddy Fork Loop (no river crossing). Meet at 8:15 a.m. at K-Mart, bound for Zigzag Ranger Station to join our leader, Glenn Walthall at 9:30 a.m. 644-0745.

4 Aug., Sat. Field trip to YOCUM RIDGE. This will be a long & strenuous day (14 mi. round trip & over 3000 ft. gain), so we must leave the trailhead at 8:00 a.m. Carpool at K-Mart at 6:30 a.m. or meet the leaders at the Zigzag R.S. in time to leave there at 7:30 a.m. Carry water, lunch, snacks, & insect repellent. Leaders: Wayne & Jeanne Huffstutter, 244-8224.

Siskiyou

--- No meetings in July or August.

8 July, Sun. Field trip to CHERRY CREEK PROPOSED RESEARCH NATURAL AREA. This old glacial valley on the E side of the Cascades (4800 ft. elev.) is a candidate for U.S. Forest Service RNA status. It is included in the proposed Sky Lakes Wilderness. This trip includes 6 mi. of hiking, gentle grade, all day (bring lunch). Ashland people please contact Wayne Rolle, leader, 482-0093. Meet in Medford at Sherm's Thunderbird Mkt. (Biddle Rd.), 8:30 a.m.; junction of Cherry Cr. Rd. #3450 & Rocky Flat-Ft. Klamath Rd. at 9:30 a.m.

14 July, Sat. Field trip to O'BRIEN-HAPPY CAMP ROAD. This easy day excursion will include botanizing by car, with frequent stops for Brewer's spruce, & lots of serpentine peridotite species. Meet at the Medford K-Mart at 9:00 a.m. Trip leader will be Dave Garcia, 899-9039.

21-22 July, Sat.-Sun. Field trip to FROG POND. This will be a weekend backpack to Frog Pond, Cameron Meadows & the Mt. Emily area in the headwaters of the Applegate River. Leader: Wayne Rolle, 482-0093.

28 July, Sat. Field trip to APPLEGATE VALLEY, DUTCHMAN'S PEAK, RED MOUNTAIN, & THE MT. ASHLAND LOOP. This loop drive with frequent stops will be an easy all-day excursion. Meet at the Ashland Bi-Mart 8:00 a.m., Medford K-Mart 8:30 a.m. Leader: Frank Lang, 482-5235.

4-5 Aug., Sat.-Sun. Field trip to TOWHEAD LAKE. This overnighter is a joint trip with the Sierra Club. This will be moderate backpacking with excellent botanizing in the Red Buttes area. Leader: Diane Newell Meyer, 482-2263.

Willamette Valley

Willamette Valley Chapter's officers for '84-'85 are: President, Larry Scofield; Vice Pres., Dr. Don Eastman; Secretary, Martha Blau; Treasurer, Heike Eubanks; Past Pres., Wilbur Bluhm.

7 July, Sat. CRESCENT MOUNTAIN, 8 mi. round trip hike. We may not reach to summit if there is snow, but there will be flowers all the way. Carpool S Salem K-Mart 7:30 a.m. Frances Schaeffer 393-7492.

14 July, Sat. IRON MOUNTAIN, with Salem Audubon Society. Carpool S Salem K-Mart, 7:30 a.m. Leader: Clint Urey, 743-2802.

21 July, Sat. No field trip scheduled.

28 July, Sat. THE PYRAMIDS--Middle Santiam. Carpool S Salem K-Mart, 7:30 a.m. Heike & Wally Eubanks, 390-2257.

4 Aug., Sat. MT. HOOD AREA. Carpool S Salem K-Mart, 7:30 a.m. Lois & Bill Eagan, 393-2131.

NEW T-SHIRT DESIGNS READY

NPSO T-shirts are available in three designs featuring drawings of Trillium ovatum (green on yellow shirt) and Opuntia polyacantha (black on silver-gray shirt) by Julie Kierstead, and Darlingtonia californica (black on plum-lavender shirt) by Linda Vorobik. The heading "Native Plant Society of Oregon" appears above the drawing on each shirt. Shirts are short-sleeved, preshrunk, 100% cotton in mens' sizes S, M, & L. Opuntia is also available in XL. Cost is $7.00 to individuals, plus $1.00 postage. Most chapters will have a few shirts on hand to sell at their July meetings. Chapters may purchase shirts for $6.00. Special orders (mimimum twelve, one color) on French cut, long sleeve, sweatshirts, etc. are also possible. Some of last year's shirts, which are white with a green NPSO logo, are available--we have two medium and twelve large. When ordering, please indicate size and design, and a second choice if there is an acceptable one. Make checks out to: Emerald Chapter, NPSO. Order from: Leighton Ho, 1826½ Lincoln St., Eugene, OR 97401; phone 345-3252.

CONGRATULATIONS DR. MAURER

NPSO member Teresa Maurer recently completed her Ph.D. at the University of Oregon. Her dissertation is entitled *Reproductive Ecology of the Perennial Legume Lupinus caudatus and Interactions with its Associated Seed Weevil Tychius linellus*.

MONEY NEEDED FOR BOOK ORDER

I now have enough orders for Intermountain Flora vol. 4 to qualify for the 10% discount, and will be ordering as soon as I receive a check to cover the cost of each book ordered. Those who would like to order a copy should send $69.75 to me c/o the Berry Botanic Garden, 11505 SW Summerville Ave., Portland, OR 97219. Please include your phone number, so I can call you when they arrive.

Julie Kierstead
Portland Chapter

HELP PROTECT RARE PLANTS ON STATE PARKS AND WAYSIDES

The Oregon Natural Heritage Data Base and the Nature Conservancy have entered into an agreement with the State Parks and Recreation Division which will identify and analyze significant natural features on State Park lands. The Data Base will compile reports on rare and endangered species and ecosystems, and will provide information as to how they can best be managed within our statewide Park and Wayside system. Your knowledge regarding occurrences of significant natural features on State Park Lands can help protect them! If you have discovered any such features through your wanderings on Parks or elsewhere, please let us know. We want our reports to be complete. Thanks.

ONHDB, 1234 NW 25th Ave.
Portland 97210 (228-9550)

BLM PUBLIC COMMENT OPPORTUNITIES

The following schedule lists opportunities for public involvement in Oregon BLM planning, environmental impact assessment, decision-making, and comments on proposed regulations. Copies of published documents, and specific dates, times, and locations for public meetings are available from appropriate district offices.

BURNS--John Day draft resource management plan/environmental impact statement available for 90-day public review in mid-June. Public meetings will be held on July 18 in the Harney County courthouse, Burns, OR, and July 19 in the Grant County Courthouse, Canyon City, OR for answering questions regarding the draft analysis and plan. Both meetings will begin at 7:00 p.m.

MEDFORD--The Medford (district-wide) land-use plan amendment and environmental assessment for proposed areas of critical environmental concern will be available in mid-June for a 60-day public comment period. A public meeting will be held in the Medford district office on July 11 at 7:30 p.m. to answer questions on the document.

The Editor's Page

This month I have a pretty good excuse for being late with the Bulletin--I left rather abruptly for Washington, D.C. to testify before the House Interior Committee's Subcommittee on Interior Lands and National Parks, on the subject of botanical resources in Bureau of Land Management Wilderness Study Areas. I was unprepared, so I dropped everything (Bulletin included) to study BLM documents and to put together a reasonable statement.

Eighteen people from eight western states testified, including two other Oregonians: Don Tryon, of Sage Association, whose writing you have seen in the Bulletin; and Alice Elshoff, a school teacher from Bend who has adopted the Badlands Wilderness Study Area and is helping the BLM to assess its wilderness values and management problems. We visited members of the Committee and members of our Congressional delegation; we held a press conference; and we attended two hearings, the first to testify, and the second to hear Secretary of Interior William Clark respond to some of the questions raised by our testimony.

I suspect many of you would like to know more about the BLM Wilderness review. Here is a brief overview of the situation:

In 1976, Congress passed the Federal Lands Policy and Management Act (FLPMA, pronounced "flip-ma"), which was designed to broaden the BLM's philosophical base to include consideration of biological, archaeological, geological, and recreational resources. In other words, FLPMA changed the agency from a grazing and mining lessor to a multiple-use manager of public lands for public benefit. FLPMA also directed BLM to conduct a wilderness review of all its lands (see Feb. 1984 issue of the Bulletin) before 1991. The wilderness review consists of an inventory phase, which has been completed, a study phase, and a report to Congress. The inventory phase identified areas which met the wilderness requirements established by FLPMA and BLM policy, i.e. unroaded, natural, and with outstanding opportunities for solitude or primitive recreation. Despite these stiff criteria the BLM still found 2,652,00 acres in Oregon which qualified, in 94 Wilderness Study Areas. These, according to Sage Association's Don Tryon, are "the cream of the crop". That is,

Oregonian / Friday 22 June

Interior chief defends role in wilderness studies

By JAMES C. FLANIGAN
of The Oregonian staff

WASHINGTON — Interior Secretary William P. Clark tried Thursday to stave off claims by environmentalists that he had failed to reverse anti-wilderness policies of his predecessor James G. Watt.

Clark told the House Interior Subcommittee on Public Lands that one of his highest priorities was to complete a review of 24 million acres of Bureau of Land Management wilderness study areas.

Representatives of conservation groups from nine Western states, including Oregon, testified before the same subcommittee Tuesday that fragile BLM range and desert lands were threatened by policies instituted by Watt and left uncorrected by Clark.

Congress in 1976 gave the Department of Interior up to 15 years to finish a review of its public lands set aside as wilderness study areas, but Clark estimated the BLM should be finished with its study reports by the end of 1987.

However, Clark said some wilderness recommendations for the 758 study areas under review may not be made until the Oct. 21, 1991, deadline because more time may be needed in certain cases to conduct mineral assessments in the affected areas.

The subcommittee's chairman, Rep. John F. Seiberling, D-Ohio, voiced the concern of groups such as the Sierra Club and Wilderness Society that the department would shortcut the study process and recommend only minimal wilderness designations by speeding up the review.

Seiberling likened the fast-track approach to the captain of a trans-Atlantic airline flight telling his crew and passengers that he had both good news and bad news to report.

"This is your captain speaking," Seiberling quoted the mythical captain as saying. "The good news is we are ahead of schedule. The bad news is we are lost."

Seiberling said the Interior Department should take its time and do the job right to avoid court challenges like those that happened with U.S. Forest Service reviews of national forest land wilderness study areas.

Rep. Jim Weaver, D-Ore., said he hoped the Department of Interior would consider critical watersheds, fish and wildlife habitat, archaeological values, endangered plant life and other factors in determining wilderness.

Weaver noted that the BLM has only a dozen botanists to judge the millions of acres it controls. Four of those are in Oregon, but they are based west of the Cascades and not in the eastern part of the state where the BLM's wilderness study areas are concentrated, he said.

"That's what I meant about acceleration of this schedule" Seiberling said, once again adding that the Interior Department may be in too big a hurry.

Earlier in the hearing, Seiberling questioned Clark about Watt's decision after the 97th Congress adjourned in December 1982 to drop 1.6 million acres from the wilderness study list.

Watt used three reasons for cutting the lands from an inventory of 24,386,000 acres proposed in November 1980 for wilderness review by then-Interior Secretary Cecil Andrus.

Watt removed wilderness areas of less than 5,000 acres, those located next to wilderness or wilderness study lands controlled by other federal agencies, and split-estate holdings where the government controlled the land surface but not subsurface rights to potential mineral and oil resources.

Clark declined comment because he said that issue was still the subject of a court case brought by the Sierra Club against Watt.

The House Interior Committee's Subcommittee on Public Lands and National Parks is responsible for overseeing the BLM's implementation of the Federal Lands Policy and Management Act. Subcommittee chairman John F. Seiberling was very sympathetic to complaints of mismanagement and unnecessary hurry of the Wilderness review. I was gratified that both he and Jim Weaver, Oregon's only representative on the subcommittee, responded to my testimony on botanical resources by questioning Secretary of Interior William Clark about the impossibility of doing an adequate botanical survey of Wilderness Study Areas, given the few Botanists the BLM has and the accelerated Wilderness Study deadline of the Reagan administration. Mr. Clark had no ready answer (it was clear he had not been briefed on botanical issues), but he promised to look into the matter.

Statement of Julie R. Kierstead

to

The House Interior Committee

regarding Bureau of Land Management Wilderness Review

June 19, 1984

My name is Julie Reinwand Kierstead. I am a professional botanist, director of a seed bank for rare and endangered plants, at the Berry Botanic Garden in Portland, Oregon. I thank you, Mr. Seiberling, for the opportunity to testify before this committee. I will be talking about the value of botanical resources in BLM Wilderness Study Areas--their value to us for research and education. I am very concerned that the BLM is not addressing these values adequately in the Wilderness Study process, despite the fact that Congress has directed the Bureau to do so.

The arid lands represented by these BLM Wilderness Study Areas are the last botanical frontier of the United States. Botanical exploration in the West is by no means complete. New species are still being discovered. Tragically, the vegetation of the West has been so abused that most of these newly described species are added to the Endangered Species list as soon as they are given names.

Why are plants important to our public lands in the arid West? First of all, vegetation is clearly the foundation of the health of any ecosystem. Plant communities support a diversity of wildlife, and prevent soil erosion; and healthy, stable vegetation enhances the naturalness of a Wilderness Study Area, a prime criterion in assessing its suitability as Wilderness.

Pristine plant communities are scientifically important, for comparison with managed systems. Without knowing what these communities looked like before, we have no basis for understanding the changes which occur because of our management practices. We still have some good quality bunchgrass communities left--in the Hawk Mountain, Devil's Garden, and Squaw Ridge Wilderness Study Areas, for instance--and they ought to be protected.

Individual plant species are also scientifically valuable, especially those which inhabit particular soils or which are geographically restricted. These are the kinds of species which help scientists to solve problems of evolutionary theory. The Leslie Gulch area is famous among botanists for its plants. Many of them grow nowhere else in the world. Unfortunately, part of Leslie Gulch was dropped from consideration by Secretary Watt in 1982, and as the result the BLM is recommending the other part, the Slocum Creek unit, as unsuitable for Wilderness.

The educational value of Wilderness is apparent to me, because I received my first botanical training in the wilds of eastern Oregon. There are thousands of students who have learned geology, botany, ecology, and zoology on the slopes of Steens Mountain and in the Alvord Basin.

Recreational interest in native plants is growing rapidly. Every western state has a native plant society. The Native Plant Society of Oregon has almost 700 members, including both professional botanists and amateur wildflower enthusiasts. I have here a sample of the Native Plant Society of Oregon Bulletin, and I would like to draw your attention to pages 10-11, an article dealing with BLM Wilderness. These people are wilderness supporters. They have scheduled more than twenty field trips into Wilderness Study Areas in Oregon this year.

I would like now to talk briefly about endangered species and the Wilderness Study review. Oregon has three species which have actually been listed under the Endangered Species Act. Statewide, Oregon has another 132 candidates for listing, of which 37 occur in the arid lands which the BLM has inventoried for Wilderness. Four of the 37 are considered to be extinct, as they haven't been seen since 1960. Fully 80% of the remainder are classified as category 2 candidates, which means that further research is called for before a decision can be made as to whether or not the species warrants listing. I stress this point in order to draw attention to our lack of knowledge about many of these plants.

The BLM, unfortunately, has no one to look for these plants. There are at present a total of twelve permanent BLM Botanist positions in the United States. Oregon has four of those positions, but all are in districts west of the Cascades. There is not a single permanent BLM Botanist in eastern Oregon, Nevada, Utah, or Idaho.

The result is that, although the BLM Wilderness Inventory Handbook (Sept. 27, 1978, p. 14) states that the presence of rare and endangered species should "be noted and considered in assessing the wilderness potential of a unit", and that their presence "will enhance an area's wilderness quality", few of the Wilderness Study Areas have been surveyed for Rare and Endangered species. The BLM reports on the seven units in the Trout Creek Mountains of southeast Oregon and northern Nevada all make note of the great diversity of plants and animals there, but only the Mahogany Ridge unit had been surveyed for Rare and Endangered species. Eight plant species of concern were found. The Mahogany Ridge unit has been recommended as unsuitable for Wilderness.

Perhaps more important for the future is the fact that there are literally hundreds of native plant species not yet threatened or endangered which are heading in that direction, as their habitats continue to shrink or deteriorate. It is the stated policy of the BLM to ensure that the habitats of sensitive plants will be managed and/or conserved to minimize or eliminate the need for Federal or State listing in the future (Instruction Memorandum No. 79-64, U.S. Dept. of Interior, BLM, Nov. 2, 1978). The best way to keep them off the endangered species rolls is to protect their habitats now. Wilderness is an excellent way to protect large numbers of species at once, by keeping tracts of native vegetation intact for our future use--for research, for pleasure, and for the education of our children in the way the West used to look.

Thank you very much, Mr. Chairman.

all the roadless and natural BLM lands which did not also offer outstanding solitude or recreation opportunities were eliminated in the inventory phase.
During the study phase all resources, values, and uses of each Wilderness Study Area (WSA) are to be weighed, to decide whether the area is more suitable for wilderness designation or more suitable for other uses. Congress mandated a 1991 deadline for this enormous task, but the BLM plans to finish even earlier, by 1987. Some of the resources, values, and uses to be evaluated include archaeological sites, wildlife, vegetational communities, educational and scientific values, recreation, rare plants and animals, and geologic features, along with wilderness values of naturalness and solitude, and economic uses such as grazing and mining. The accelerated study phase timetable promoted by the present administration leaves little time for looking at botanical resources such as pristine plant communities or rare and endangered plants in Wilderness Study Areas. In reading the BLM's Unit Resource Analysis reports, which describe the resources present in each Wilderness Study unit, it is apparent that the botanical information is inadequate--few of the WSAs have even been surveyed for R/E species. And the BLM has eliminated its Botanist positions in eastern Oregon since the inventory and study periods began. Somehow I don't think this is what Congress had in mind.
All Wilderness Study Areas are protected to some degree, under the BLM's Interim Management Policy, from degradation during the study process. The idea is to ensure that, when Congress is ready to choose wilderness areas, it still has a choice. Exceptions are grazing and mining activities with grandfather status, which may continue in WSAs even if they impair the wilderness values of the WSAs. But even setting aside the issue of grandfathered rights in Wilderness Study Areas, there are evidences of numerous Interim Management Policy violations throughout the West.

BLM wilderness deserves your thought. In Oregon the issue is clear-cut: Oregon's Wilderness Study Areas have little mineral value, and grazing is not profitable. It is therefore not a question of locking up valuable resources in wilderness. The most valuable resources for the public good on these lands--educational, scientific, ecological, and recreational--can only be kept intact by protecting their wildness.

Well, I have gone off on a tirade, which I did not intend to do. I feel strongly about the need to conserve the little bit of native vegetation we have left in the West. Your help is needed. Adopt a Wilderness Study Area. Come to BLM hearings. Your nearest BLM office can provide you with a Wilderness Status Map for Oregon (and a key to interpret it). For help and information about which areas need adopting, call or write to:

Don Tryon	*Andy Kerr*
Sage Association	*Oregon Natural*
P.O. Box 85	*Resources Council*
Powell Butte, OR	*1161 Lincoln St.*
97753	*Eugene, OR 97401*
(503) 447-3508	*(503) 344-0675*

If you have taken a field trip to a Wilderness Study Area, you probably qualify as a botanical expert on the place, who knows more about its botanical values than the local BLM office does. Tell them about it! They'll be glad to hear from you.

Julie

To the Editor:

Our Chapter's Board has asked me to respond to Michael Fahey's letter of concern about NPSO flower shows. We have offered a show at Silver Falls State Park the last two Mother's Day weekends. This year, 191 species of native plants and wildflowers were viewed by an estimated 1500 visitors on Saturday and Sunday, with an additional five groups of school children on Monday and Tuesday. 38 chapter members invested over 200 hours on this year's show.

We wish Mike had visited one of our shows, as he would have seen that his concerns are ours. Specific direction was given by our Board to collecting: NPSO Guidelines and Ethical Code were distributed to all plant collectors with a letter stating in part, "As you know, we indicate at the show that our specimens have not bee collected indiscriminately....In essence, when in doubt, DON'T, even if it means that species will not be represented in the show."

At both shows, signs were conspicuously displayed: "Flowers for this exhibit were collected from private gardens" and "In the park, take only memories and leave only footprints."

This year's display, as well as last year's, featured a repeating slide show of rare and endangered Western Oregon species with commentary. I personally provided comments on Sunday of this year and, in addition to discussing the individual plants, mentioned several issues concerning the protection of threatened and endangered species, including but not limited to photography as the ideal way to collect native plants and that there are commercial sources specializing in native plants and seeds, if you must grow a rare plant.

In the interests of brevity, I have omitted some practices we developed this year, which I believe carry out the spirit as well as the letter of the NPSO Guidelines and Ethical Code. I have mailed a more complete statement to Mike, so that he and his committee can review our practices prior to next year's show.

I will be interested in hearing from others who have had responsibilities similar to mine, so that there can be a fruitful dialogue. I believe we fail in our main mission -- to educate the public -- if we were to abandon public exhibits. We may well need to develop the NPSO equivalent of the Good Housekeeping Seal of Approval. Our Chapter would be delighted if we merited such endorsement.

Mariana D. Bornholdt, Willamette Valley Chapter
Co-Chairperson 1983 and Chairperson 1984
Silver Falls Mother's Day Wildflower Show

FOREST WILDERNESS ACT SIGNED

After more than six years of concerted effort by Oregon conservationists, sportsmen, Indian Nations, commercial fishermen, outdoor recreationists, and many others, the Oregon Forest Wilderness Act of 1984 has been signed into law. Although the bill falls far short of the much larger omnibus package proposed by conservationists (3.4 million acres), it does contain some of Oregon's most treasured wild forestlands.

Given that this is not the last Wilderness bill for Oregon, it is monumental legislation that preserves some of this state's most cherished forested wildlands, such as Salmon-Huckleberry, Sky Lakes, Boulder Creek, North Fork Umatilla, Mill Creek, Coast Creeks, Badger Creek, and Table Rock. These areas are protected in (or nearly in) their entirety. It secures major toeholds for the North Fork John Day Complex and Middle Santiam, although their boundaries are woefully inadequate. These lands had been immediately threatened with logging and roadbuilding, as are so many other wildlands not designated Wilderness by this bill.

Unfortunately, the bill "releases" twice as much de facto wilderness as it protects. Although conservationists invested enormous effort into this legislation, the new law does not accomplish its intended purposes: protection of sufficient critical plant and wildlife habitat, key watersheds, ecological diversity, and opportunities for backcountry recreation such as hunting, fishing, hiking, and camping. Until future supplemental legislation is enacted, conservationists cannot agree with Oregon Senator Mark Hatfield, who stated that "We've finally resolved the controversy that has raged in Oregon for twenty years over wilderness."

(Taken from Special Report: 1984 Oregon Forest Wilderness Act! by the Oregon Natural Resources Council)

NPSO'S NEW YEW GAVEL

The gavel presented to the Native Plant Society of Oregon by retiring President Rhoda Love on June 2, 1984, is made from the wood of the Pacific yew (*Taxus brevifolia* Nutt., Taxaceae). Yew wood is heavy, very strong, hard, and durable. The color of the heartwood varies from dark orange to red. Yew wood is typically very fine-grained; woodworkers like it because it finishes nicely. The bark of the yew tree is reddish-purple in color and it flakes off in long scales. The needles are dark green and somewhat similar in appearance to those of the grand fir (*Abies grandis*). However, yew trees do not bear cones--each yew seed is surrounded by a red, fleshy, berry-like aril, which is poisonous.

The Indians of the Northwest were well-acquainted with yew wood. They used it for harpoons, bows, battle clubs, canoe paddles, and as wedges for splitting logs. It was also fashioned into eating utensils.

Pacific yew is a seldom-noticed, slow-growing gymnosperm. It may live for several centuries as part of the understory vegetation under an old-growth Douglas-fir forest. It shares a shady, damp habitat with western hemlock (*Tsuga heterophylla*), vine maple (*Acer circinatum*), sword fern (*Polystichum munitum*), oxalis, and calypso orchids.

The yew tree from which this gavel was turned grew near Marcola, Lane County, Oregon. It was growing in an area that was logged off in 1975. The tree was thirty feet tall and twelve inches in diameter. The yew wood was donated by Alan Curtis. The gavel was made by Melvin F. Moore, uncle of Charlene Simpson, former President of NPSO's Emerald Chapter.

* * * * * * * * *

YOU'RE INVITED

The Leach Garden Friends extend an open invitation to visit the Leach Manor at 6704 SE 122nd Ave., Portland, OR 97236 on July 29, 1984, in celebration of Norton & Betty Ferguson's 50th wedding anniversary; at 11:00 a.m., 12:30 p.m., or 2:00 p.m. Each of these sessions will consist of garden tours, live parlor music (piped to lawn areas), and refreshments. Casual is the vogue of the day, and walking shoes are recommended.

The Fergusons request "No gifts except donations to the Leach Garden Friends, to continue restoration of these worthy gardens, and the well-received educational programs."

LOST & FOUND

Stu Garrett found a 35mm camera in his Suburban after the Painted Hills field trip. Please contact him for return of the camera.

Annual Meeting Highlights

A canoe trip and the video tape on Rare Plants on Friday, and three very rewarding field trips on Saturday, preceded the banquet and main meeting in the Great Hall of Sunriver. The meeting, attended by about 75 people, was opened by the outgoing President, Dr. Rhoda Love, with a big Thank You to the High Desert Chapter and to the field trip leaders. The new President, Herm Fitz, was sworn in and presented with the new yew wood gavel (described elsewhere in this issue). Dr. Fitz praised Rhoda for her very excellent service to the society as President for the past two years.

Reports given:

1) Membership total was reported as 481.
2) The Jean Davis Memorial Scholarship for 1984-85 has been awarded to Ken Vanderkamp or the Portland Chapter, who will be studying under Kenton Chambers of OSU.
3) Bulletin editor Julie Kierstead expressed her thanks to her distribution committee and to all contributors. She has asked Rhoda Love to continue as a regular columnist. She welcomes contributions of all kinds.
   "Late copy means a late Bulletin." This has been Julie's main difficulty. From now on, the 10th of each month will be the final deadline for all copy. She also asked us to consider dividing the Bulletin into two publications, one monthly for schedules & time value information, and another for feature articles and such, which would be published quarterly. She asked that members comment on this proposal.
4) State R/E Chair Jean Siddall reported that field checking assignments have been sent out to the R/E Chairmen of those chapters which have formed committees. Sighting reports should be coming in soon.
5) Brief chapter reports were given.

The proposed By-laws changes, as published in the April Bulletin, were read by Herm Fitz. The motion was made, voted on, and passed, to adopt them as written.

The program was given by Dave Danley of Sunriver Nature Center, who spoke on the subject of grasslands and showed slides. "If you know ten species of grasses, you can know 90% of those in the sagebrush-steppe", he said; and he explained the difference between sagebrush-steppe and true desert.

Board meeting, Sun. June 3

Twelve members of the Board, and about fifteen other members were present.
Rhoda Love noted that several of the chapters have achieved tax-exempt status.
Alan Curtis presented information gathered for possible production of a wildflower poster. A choice will have to be made between photos and colored drawings. If drawings are used, we will have to find an interested artist. The committee to work with Alan includes Don Eastman, Leighton Ho, and Susan Kephart.
The Treasurer's report indicated we are on a tight budget. The next budget session is expected to focus on places to cut expenses, and a possible dues increase.

NPSO is well-represented in the Sunset article (May 1984) on Wilderness in the West. A total of fourteen NPSO field trips is in the supplemental list. For a free copy of the supplement, write: Wilderness Trips, Sunset Magazine, Menlo Park, CA 94025. Enclose a self-addressed business envelope with 37 cents' stamps.

Updated Chapter membership lists, prepared by Shep Wilson on his computer, were delivered to Chapter presidents, with a state list to the State President and Secretary. Many telephone numbers are missing. The intentions of those in arrears are not known. So please give this information to your Chapter president or to Julie Kierstead. A big Thank You to Shep.

A committee was formed to produce very specific guidelines for flower shows. NPSO Guidelines & Ethical Code will be used as their basis. According to Mike Fahey, "In our efforts to hold these educational exhibits, we must continue to maintain our image, demonstrating that we really are conservation-minded". Mike is chairman of the committee.

Note cards: Soon all of the current R/E note cards will be sold. Our thanks to Charlene Holzwarth for a great distribution job. Gaylee Goodrich, former Jean Davis Award recipient, is working on drawings for the next cards.

Gordon Larum of Siskiyou Chapter was appointed by the Board to fill the one-year term opened by the By-laws change.

A motion was passes that a Conservation committee be formed. Rhoda Love will be the State Chairman, and each chapter will provide a representative.

Also passed was a motion to support, in principle, the efforts of the Corvallis Audubon Society to pass State legislation concerning the deliberate killing of federally protected migratory birds.

Joint meeting of native plant societies: The 1985 conference of Western Native Plant Societies is to be held at Eastern Oregon State College in La Grande. Tentative dates are August 2-4, 1985. Ruth Hansen is chairing the planning committee and would like some help.

Next annual meeting: Tentatively, the 1985 annual meeting of NPSO will be hosted by the Siskiyou chapter.

Rhoda Love presented a draft agreement with The Nature Conservancy to allow for full exchange of information under which copies of NPSO sighting reports would be provided to the Oregon Natural Heritage Data Base. This issue will be discussed further at the autumn meeting of the Board.

Next Board meeting: The next meeting of NPSO's Board of Directors will be held at Jean Siddall's house in Lake Oswego, home of the Oregon Rare & Endangered Plant Project, on October 6.

The meeting adjourned with another Thank you to the High Desert chapter for hosting a great annual meeting.

Jeanne Huffstutter
Secretary, NPSO

State Trips Successful

The Painted Hills field trip for the state meeting 2 June 1984 was a great success, particularly considering the variety of John Day endemics we were able to see. In all, 52 species were blooming. Memorable displays of Cleome platycarpa (golden cleome) accented the red of the local ash layers. Opuntia polyacantha (yellow prickly pear), Cryptantha celosioides (cockscomb cryptantha), Salvia dorrii (purple sage), and especially Lewisia rediviva (bitterroot) put on a good show. Of the several endemics we found, Chaenactis nevii (John Day chaenactis), Astragalus misellus (pauper milkvetch), Castilleja xanthotricha (yellow hairy paintbrush), and Penstemon eriantherus var. argillosus (crested tongue penstemon) were blooming, and Pediocactus simpsonii (barrel cactus) was passing out of bloom. A stop at Mark's Summit in the meadow was rewarding, and Allium pleianthum (many-flowered onion) was seen at the Prineville Overlook.

A special treat for Wayne Huffstutter was seeing squaw apple (Peraphyllum ramosissimum) in bloom on Mill Creek. We speculated on whether this genus should be reviewed for Oregon's T & E list.

Stu Garrett
High Desert Chapter

Peraphyllum ramosissimum

(reproduced from Hitchcock et al., *Flora of the Pacific Northwest*, with permission from the publisher)

Dear Fellow NPSO Members:

Thank you for your participation in the Lawrence Grasslands field trip the June NPSO annual meeting. To my knowledge, this was the largest group to visit this special area, and was also my first effort at leading a group of such size and diverse interests. Because of this, I wasn't always able to speak with each of you personally and identify all of the 70+ species that were seen. I hope that I can make the trip an annual event open to all NPSO members if there is interest, and my experience this year taught me much about large group handling and time estimation so that next year's would be even better!

However, whether you attended the field trip or not, if you would like to have a list of the species we noted or be on the mailing list for a soon-to-be published brochure about Lawrence Grasslands, or if you want to know more about any aspect of the preserve, please send me a postcard or letter, or call The Nature Conservancy office at 228-9561. Also, I hope that NPSO members will visit on their own, but ask that you call the above number before your visit. They will send you directions and a few visitation rules. We request this courtesy so that we can have accurate visitor use figures, and maintain good relations with nearby landowners. This area is used actively for education and research and we need continued cooperation to maintain this special bunchgrass-steppe which has been designated nationally as a "model preserve".

A brief word on another topic-copies of the NPSO rare plant video are still available from me for viewing at meetings, etc. Please note the new address below since it's different from the NPSO directory listing and the one published here previously.

Sincerely,
Tammy Maurer
139 NW 35th
Corvallis, OR 97330
752-6170

PLANT FAMILY PROFILES

by Herm Fitz

The Hydrophyllaceae - WATERLEAF FAMILY

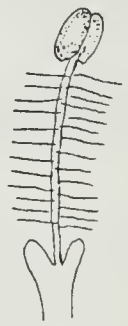
The Waterleaf Family is a smallish family of about 250 species in 18 genera - cosmopolitan in distribution and especially well represented in North and South America. The family is apparently absent in Australia. In Oregon we find 7 genera which include about 50 species. By far the largest genus is Phacelia (*Phacelia*) with 30 or more species scattered throughout the state from coastal beaches and sand dunes to rocky slopes and alpine ridges, from moist banks and wet places to arid, sterile fields, flats, plains or low alkaline ground. Some are restricted to serpentine outcrops. Six of the species are considered rare and endangered in Oregon. Nemophila (*Nemophila*), with 6 species, is found in all localities in moist fields, shady slopes, and open woods. The familiar Waterleaf (*Hydrophyllum*), the type-genus of the family, with 5 species, named for the watery appearance of the foliage (Greek *hydro* = water; *phyllon* = leaf), is found in damp shady woods and thickets, or on moist banks and slopes in most localities. Four species of Mistmaidens (*Romanzoffia*) are here: *R. tracyi* on coastal bluffs; *R. suksdorfii* and *R. sitchensis* on wet cliffs and ledges throughout a wide range of elevations; and the undescribed *R. thompsonii* in open, south-facing seep slopes in the old western Cascades. In the dry hills and sandy areas of southern and eastern Oregon, often with sagebrush, we find three species of Nama (*Nama*). Of these dwarflike xerophytes, *N. lobbii* of Jackson County, is listed as very rare and endangered in Oregon, known only from Mt. McLoughlin - though more abundant in California. Two species of Hesperochiron (*Hesperochiron*) are found on damp slopes, flats and meadows east of the Cascades. Finally, in the dry open ground of southern Jackson and Josephine Counties, and on into California, the glutinous, aromatic shrub Yerba Santa (*Eriodictyon californicum*) may be found.

Members of the Waterleaf Family are annual or perennial herbs or small shrubs with simple or compound leaves, usually hairy, bristly, or glandular, without stipules. The regular, bisexual flowers are often blue to purple, through some are creamy white or even yellow. Borne most often in helicoid or scorpioid cymes which tend to uncoil as anthesis proceeds, the flowers each have 5 free sepals, with or without auricles between the lobes, a 5-lobed united corolla - often bell-shaped, funnelform, or rotate - with 5 stamens inserted at the base of the tube, alternate with the lobes. The stamens, which may be of equal or unequal length, often have hairy filaments and in some cases are conspicuously exserted, protruding far beyond the rim of the corolla. In addition, the filaments often have a pair of small appendages at the base, which protect the nectaries that attract the pollinating bees. The pistil is of two fused carpels with a superior ovary (½ inferior in *Nama*) bearing a single style divided into two branches, partly or wholly. The ovary is basically of one locule, with two parietal placentae; however in some cases it appears two-celled with axile placentation due to the intrusion of the placentae which nearly or quite meet in the center (*Phacelia*, in part; *Nama*, *Eriodictyon*, *Romanzoffia*). Each locule may contain two to many ovules which mature after fertilization to seeds that have interesting surfaces: some are carunculate (with a bump-like protuberance), others may be pitted, sculptured, reticulate, or muricate (beset with small, sharp projections). The fruit is a capsule. The Waterleaf Family Is closely allied with the Phlox (Polemoniaceae), Borage (Boraginaceae), and Morning Glory (Convolvulaceae) Families.

A schematic drawing of a helicoid cyme showing the maturing capsule, the typical flower with united corolla and exserted stamens, and the general spiral nature of the uncoiling inflorescence.

Cross section of the waterleaf ovary in which the parietal placentae have intruded, thus forming an apparently bilocular condition with axile placentae.

Cross section of a typical waterleaf ovary, showing the unilocular condition with two parietal placentae.



Typical stamen of the Waterleaf Family. Note the appendages at the base and the hairy filaments.

The general floral formula for this family is:

Ca^5 $Co^{(5)}$ S^5 $P^{(2)}$ with a superior ovary

When you come upon an herb or shrub with hairy or bristly foliage, regular 5-parted flowers in helicoid cymes, each with a united corolla, perhaps exserted stamens, and a pistil of two carpels, either unilocular or bilocular, maturing to a capsule, you will know that you have chanced upon a member of the Hydrophyllaceae - the Waterleaf Family.

New Sphagnum species from Pacific Northwest

A 1980 grant from the Mazamas Research Committee enabled me to investigate the vascular and bryophyte floras of numerous Sphagnum mires in the Oregon Cascades. Among my collections were two specimens of Sphagnum which when wet appeared indistinguishable from the common S. subsecundum, but when dried they assumed a crisped, contorted appearance with microscopic characteristics quite unlike any other Sphagnum. During that same summer Jean Siddall collected another specimen while working on the Mt. Hood National Forest. Howard Crum (University of Michigan, Ann Arbor) located a fourth specimen collected by Wilfred Schofield in central British Columbia. These plants were described by Richard Andrus (State University of New York, Binghamton) as a new species, apparently endemic to western North America: S. crispum Andrus (Bryologist 86: 257-262. 1983.). In Oregon it is presently known from one site each in Clackamas, Lane and Douglas counties.

Western North America has only one other described endemic Sphagnum, S. mendocinum Sull. & Lesq., ranging from northern California to British Columbia and inland to northern Idaho. It was described in 1874 from a Henry Bolander collection but was actually collected even earlier by David Douglas. There is also one and perhaps two undescribed Sphagnum species recently collected by Wilfred Schofield in the Queen Charlotte Islands of British Columbia.

Although complicated by its similarity to S. subsecundum when wet, Andrus' observation is no doubt correct that the apparent rarity of S. crispum may merely reflect the limited amount of collecting done in our area. The same can be said for the apparent discontinuous distribution of many bryophytes.

Real distribution patterns can only be obtained by industrious field work, which in the case of bryophytes means collecting, because unfortunately so many of the taxonomic characters are microscopic. Therefore the next time you go afield intent not to collect, indulge the bryologist, who must collect those tiny plants in order to identify them.

John A. Christy
University of British Columbia
Department of Botany
#3529-6270 University Blvd.
Vancouver, B.C., CANADA
V6T 2B1

SANDWORT H.Q. FOUND

Arenaria franklinii var. *thompsonii*, a supposedly extinct endemic of north-central Oregon, has been rediscovered--in central Washington! According to Mark Sheehan of the Washington Natural Heritage Program, a large population of Franklin's sandwort was found by S. Reid Schuller of WNHP, growing on stabilized sand dunes in Adams Co., Washington, near the Columbia National Wildlife Refuge. The plant has never been recorded from Washington before. Ironically, the size and extent of the population indicate that this area may be the center of distribution for the taxon. The Oregon populations, all on sandy soil along the Columbia River from Sherman Co. to Morrow Co., were much smaller. The plant had not been collected since 1955.

Arenaria franklinii var. *thompsonii*

Welcome, New Members

Blue Mountain Chapter
Karl Holte

Corvallis Chapter
Shirley Atwood

Emerald Chapter
Jeff Miller

High Desert Chapter
Michael & Pamela Kelly
Bob & Barbara Duke

Mid-Columbia Chapter
John & Nancy Krzeszak
Jeane Bailey
Georgia Jubitz
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Stephon N. Kasch
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Beverly Landen
Lorie Topinka

Willamette Valley Chapter
Marnin L. & Christine Helland
Dr. & Mrs. Jay C. Quast
Donald Dimock

NPSO MEMBER ATTENDS CISPUS STUDY WEEKEND

I'd like to tell you about my wonderful experience at the Washington Native Plant Society's Study Weekend, May 18-20, 1984, at the Cispus Center near Randle, Washington. Two nights' lodging and five full meals were provided us at a reasonable cost. Cispus, a former Job Corps Center in the heart of Gifford Pinchot National Forest, has been converted to an ecological education center run by the Washington Association of School Principals.

After arrival Friday evening, we were treated to an excellent taped slide presentation of "Native Plants of Western Washington". Saturday a variety of programs was offered: classes on Bryophytes, Grasses, Plant Pollination, and Plant Photography; a field trip featuring forestry management; and a hike on one of the many trails surrounding the Cispus Center. Despite rainy weather, I enjoyed the three-hour field trip, led by a U.S. Forest Service employee, which included a trip to a Douglas-fir seed farm, followed by several stops for glimpses of various stages of Douglas-fir growth and development, spanning a hundred years. An afternoon hike to a lovely waterfall on the Burley Mountain trail showed many plants in bloom--oxalis carpeting the forest floor, with occasional Calypso bulbosa, Dicentra formosa (bleeding heart), Viola, and salmonberry (Rubus spectabilis) plants. We deciphered two kinds of twayblade, Listera cordata and L. caurina, and admired an exquisite mitrewort (Mitella pentandra), as well as last year's pinedrops (Pterospora andromedea). Before supper, we saw a similar taped slide show on "Eastern Washington Grasslands", just as well done.

Informative presentations ran continuously through Saturday evening, beginning with an interesting and optomistic report on the recovery of native plants around Mt. St. Helens. Researcher A.B. Adams noted that, while essentially no annuals were found in 1980, their numbers and variety have tripled every year since. Mycotrophic plants, as could be expected, didn't survive at all. However, those plants with perennial underground parts (geophytes) survived and recovered best, along with those plants covered by snow at the time of the eruption. A tenfold increase in conifers in 1983 was also noted. We were shown recent slides of "islands of vegetation", small areas with high concentrations of plant species, serving as epicenters of dispersal. Mr. Adams also described the frantic initial seeding by the Army Corps of Engineers, an effort which failed, and the better job which Nature has done on her own. Pam York next presented a summary of her mimicry research project on Mt. Rainier meadows, in which she studied pollinations patterns in three white-flowered species: valerian (Valeriana sitchensis), lovage (Ligusticum sp.), and bistort (Polygonum bistortoides). This was followed by two presentations featuring particular species: one on Holodiscus (oceanspray) and its potential for domestic landscaping, by Clayton Antuan; and the second an overview of Castilleja by Mark Egger, complete with slides and an ID handout summary. Toni Quinn gave the fifth evening program, on classification of decaying

logs in forests--how nurse logs develop through five decay stages. She did say she rarely found logs beyond the third stage of development, as they are usually decimated by bears by then! The last presentation of the evening was a slide show of plants found on Steamboat Rock, narrated by Bill Barker. It is a unique flat-topped mesa above the coulee floor of eastern Washington's Columbia Plateau, and apparently well worth a spring visit.

Before Sunday morning's hike, we saw Warren Tanaka's slides of last summer's visit to the Goat Rocks Wilderness Area and heard plans for an August '84 trip. Our morning hike, by the Cispus River and around Yellow Jacket Ponds, was highlighted by two anemones (A. deltoidea & A. lyallii) and striped coralroot (Corallorhiza striata).

Before leaving Cispus, we heard news of next year's joint meeting of the native plant societies of the West, including NPSO, WNPS, and those of Idaho, Nevada, Colorado, and California. The meeting is to be held in August of 1985.

Susan Kofahl
Mid-Columbia Chapter

P.S. One word used throughout the Cispus weekend was "APHID"--Amateur Plant IDentifier.

* * * * * IMPORTANT ADDRESSES * * * * *

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.
Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.
Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.
Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.
Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.
Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.
Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.
Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.
William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.
Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

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The NPSO Bulletin is published monthly by the Native Plant Society of Oregon, which is incorporated under the laws of the state of Oregon. All are welcome to join the Society. Membership applications, from the preceding page or provided by Chapter presidents, should be sent to: Mary Falconer, 1920 Engel Ave. NW, Salem, OR 97304. Changes of address, including old address & zip code, should also be sent to Mary Falconer. Bulletin copy is due by the 10th of the month, and should be sent to the Editor, 11505 SW Summerville Ave., Portland, OR 97219; or call 636-4112.

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Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 8 August 1984

CHAPTER NEWS

Blue Mountain

--- For information about August activities, call Chapter President Harry Oswald, 276-1241 (days).

Corvallis

--- No chapter meeting until October. For information about August activities, call Chapter President Dan Luoma, 758-8063.

Emerald

--- No chapter meeting this month. For information about August activities, call Chapter President Leighton Ho, 345-3252.

20 Aug., Mon. Workshop, 7:15 p.m., Rm. 33, Science II (tentative). Warren Pavlat: HOW TO KNOW THE GRASSES.

10 Sept., Mon. Meeting, 7:15 p.m., Rm. 33, Science II. Evelyn Hess: A TOUR OF THE UNIVERSITY GREENHOUSE.

High Desert

--- No chapter meeting this month. For information about August activities, call Chapter President Marge Ettinger, 382-2255.

4 Aug., Sat. Hike in THREE CREEKS LAKE area. Meet in back of McDonald's in Bend, 8:30 a.m. Stu Garrett, 389-6981.

Mid Columbia

1 Aug., Wed. Meeting, 7:30 p.m., Mosier School.

Portland

--- No chapter meeting this month.

Our field trip meeting place is the K-Mart at NE 122nd & Sandy Blvd. (exit I-84 at 122nd northbound and meet at the S end of parking lot). If you have questions about any field trip, please call the leader or Doris Ashby, 245-2977.

4 Aug., Sat. Field trip to YOCUM RIDGE. This will be a long & strenuous day (14 mi. RT & over 3000 ft. gain), so we must leave the trailhead at 8 a.m. Carpool at the K-Mart at 6:30 a.m. or meet the leaders at the Zigzag Ranger Station in time to leave there at 7:30. Carry water, lunch, snacks, & insect repellent. Leaders: Wayne & Jeanne Huffstutter, 244-8224.

11 Aug., Sat. HELLROARING MEADOWS & LITTLE MT. ADAMS. It's time for our second ascent of Little Mt. Adams (6815 ft.!) This long day will include a fairly demanding hike, wet feet & mosquitoes. Driving distance is about 200 mi. Meet at the K-Mart at 7:00 a.m. or 8:30 a.m. at the Hood River Inn, where we will meet leader Keith Chamberlain, 1-478-3314.

18 Aug., Sat. What grows in MULTORPOR BOG? To find out, meet at 8:00 a.m. at the K-Mart or 9 a.m. at the Zigzag Ranger Station to join leader Dr. John Hammond, 654-5570.

25 Aug., Sat. Field trip to NORTH SIDE OF MT. HOOD from Cloud Cap Inn with George Lewis leading. Carpool 7:30 a.m. at the K-Mart parking lot, or meet near Cloud Cap at 9:30. For details call George Lewis, 292-0415.

11 Sept., Tue. Meeting, 7:00 p.m., First United Methodist Church, 18th & Jefferson. GARDENING WITH NATIVE PLANTS, by Stan and Doris Jewett. No matter how you feel about this subject, this program will be worth seeing.

Siskiyou

--- No chapter meeting this month.

4-5 Aug., Sat.-Sun. Field trip to TOWHEAD LAKE. This overnight backpack trip is a joint excursion with the Sierra Club. Moderate backpacking & excellent botanizing in the Red Buttes area. Diane Newell Meyer, leader, 482-2263.

18-19 Aug., Sat.-Sun. Field trip to RANGER SPRINGS. This two day trip can be an overnight backpack or a day trip. We plan to camp at the trailhead, & hike to the springs & back the next day. Meet at the Ashland Bi-Mart at 8:00 a.m., Medford K-Mart at 8:30 a.m. Jean Danielson, leader, 772-9743.

1-2 Sept., Sat.-Sun. Field trip to ALEX HOLE & CONDREY MOUNTAIN. This moderate overnight trip will emphasize botanizing around rocky crevices & cliffs. Leave Medford K-Mart at 8:00 a.m., Ashland Bi-Mart 8:30 a.m. Andy Kier, leader, 482-9403.

Willamette Valley

11 Aug., Sat. CANYON CREEK with Salem Audubon Society. Carpool at Salem K-Mart at 7:30 a.m. Contact Jerry Smith, 393-3863 or Clint Urey, 743-2802.

19 Aug., Sun. TABLE ROCK; carpool Salem K-Mart 7:30 a.m. Contact Clint Urey, 743-2802.

25 Aug., Sat. CRATER LAKE with Park naturalist. Two nights. Please sign up with Clint Urey, 743-2802, as soon as possible.

EPILOBIUM LUTEUM SOUGHT

Steven Seavey, of Lewis & Clark College, is seeking information on the whereabouts of *Epilobium luteum*. If you know of a locality where this plant grows on Mt. Hood or elsewhere in the Cascades, please contact Dr. Seavey at the Biology Dept. of Lewis & Clark, Portland, OR 97210; (503) 244-6161 ext. 316. *Epilobium luteum* differs from all other Oregon members of the genus in having creamy, rather than white or pink, petals.

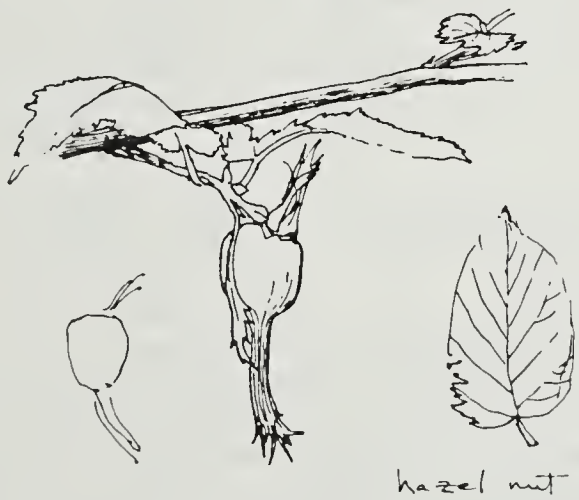
REQUEST FOR PASQUEFLOWER ACHENES

Faith Mackaness would like some achenes of *Anemone* (*Pulsatilla*) *occidentalis*. If you see this species during your montane rambles, in a place where it is plentiful, please collect a few of the feathery-tailed achenes into an envelope and send them to Faith Mackaness, 36141 Hurlburt Rd., Corbett, OR, 97019.

Dedications of New Wilderness Areas Begin this Month

Beginning late this summer, the Oregon Natural Resources Council and several local groups will be sponsoring dedications for the Wilderness Areas recently protected by the Oregon Forest Wilderness Act of 1984. The schedule of events is listed below. For details, contact ONRC at 224-0201 or 344-0675.

date	Wilderness Area	location	time
4 Aug., Sat.	Gearhart Mountain Additions	Sand Hill Crossing	noon
11 Aug., Sat.	Cummins and Rock Creeks	Rock Creek Meadows	10:00 a.m.
12 Aug., Sun.	Drift Creek	south trailhead	3:00 p.m.
18 Aug., Sat.	Grassy Knob	to be announced	noon
19 Aug., Sun.	Badger Creek	Flag Point Lookout	4:00 p.m. (tentative)
19 Aug., Sun.	Salmon-Huckleberry	to be announced	10:00 a.m. (tentative)
25 Aug., Sat.	Table Rock	saddle between rocks	noon
26 Aug., Sun.	Bull-of-the-Woods	Beachie saddle	1:00 p.m.
1 Sept., Sat.	Waldo	to be announced	2:00 p.m.
8 Sept., Sat.	Sky Lakes (tentative)	to be announced	noon (tentative)
9 Sept., Sun.	Red Buttes	Tannen Lake	noon
9 Sept., Sun.	Mt. Jefferson Additions	Breitenbush Cascades Viewpt.	3:00 p.m.
16 Sept., Sun.	Columbia Gorge	Indian Mountain	11:00 a.m.
22 Sept., Sat.	North Fork John Day	Silver Butte Overlook	11:00 a.m.
23 Sept., Sun.	Monument Rock	Table Rock Lookout	1:00 p.m.
29 Sept., Sat.	Boulder Creek	Pine Bench	11:00 a.m.
29 Sept., Sat.	Mt. Thielsen	Cinnamon Butte	4:00 p.m.
30 Sept., Sun.	Rogue-Umpqua Divide	End of Fish Valley Road	noon
6 Oct., Sat.	Middle Santiam	Bridge over river	10:00 a.m.
7 Oct., Sun.	Menagerie	Rooster Rock	9:00 a.m.
13 Oct., Sat.	North Fork Umatilla	Tollgate Overlook	11:00 a.m.
14 Oct., Sun.	Eagle Cap Additions	to be announced	11:00 a.m.
20 Oct., Sat.	Mill Creek	Bingham Prairie Campground	10:00 a.m.
20 Oct., Sat.	Bridge Creek	where road crosses Bridge Cr.	4:00 p.m.
21 Oct., Sun.	Black Canyon	where road crosses Black Canyon Creek	11:00 a.m.



Corylus cornuta

Drawing by Katie Haggerty
Vancouver, Washington

WALDO WILDERNESS DEDICATION & BENEFIT WALK AROUND WALDO LAKE

The Oregon Natural Resources Council is sponsoring a Labor Day Weekend Wilderness Celebration and Benefit Walk Around Waldo Lake, September 1-3, 1984. Weekend activities will begin Saturday with an early afternoon dedication of the just-designated Waldo Country Wilderness. Festivities will continue with a Saturday night dinner and campfire entertainment. Camping reservations for Saturday and-or Sunday can be made.

The benefit Walk Around Waldo will start at 8:00 a.m. Sunday. It is routed around Waldo Lake on the scenic and thankfully level 20-mile loop trail. Proceeds from the benefit Walk Around Waldo will support ONRC's statewide conservation activities. Walk participants are asked to collect pledges on a per-mile-hiked basis.

Registration forms for all or part of the Labor Day Weekend's events can be picked up, or mailed to you, from ONRC's Main Office, 1161 Lincoln St., Eugene, OR 97401. Please do join us and outdoor enthusiasts from all over Oregon for an exciting Wilderness Celebration in the Waldo Country!

For more information call 344-0675.

FLOWERS FOREVER
by
Rhoda Love

THE MONROE PARCEL AND SIDALCEA NELSONIANA

The Monroe Parcel. In the NPSO Bulletin for March, 1984 (p. 11) I wrote about this 1.46-acre parcel of BLM land in extreme southern Benton County (Lot 5, Sec. 6, T15S, R5W Will. Mer. Ore.). You may recall that the BLM was eager to sell the parcel and I pointed out that because a population of Sidalcea nelsoniana, a Category 1 Federal Candidate Species was present at the site, any proposed action with regard to the parcel required consultation with the Fish & Wildlife Service.

I have now seen the excellent letter dated May 8, 1984 from the FWS Endangered Species Office in Olympia Washington to the Salem District BLM. I would like to quote parts of the FWS letter here:

"We have reviewed your memoranda of January 24 and April 12, 1984. These memoranda requested consultation with us under Section 7 of the Endangered Species Act (ESA) on the dispositon of a parcel of land containing the candidate plant species Sidalcea nelsoniana.
"Our review and comments have been made strictly from a botanical perspective. This species (Sidalcea nelsoniana) is endemic to the Willamette Valley and is usually found in association with native grasses. The Monroe Parcel is a grassland grading to a madrone-Douglas fir forest. Complete botanical studies on this species have been lacking. However, enough information and data pertaining to the species' niche and distribution have been gathered to warrant its status as a candidate for a listing proposal...

"Based on the information and conditions presented, we recommend against (sale of the parcel). Management of this parcel for the benefit of Sidalcea nelsoniana would greatly aid the protection and possibly future recovery of this species..."

Bulletin readers may see a full copy of the FWS letter by requesting one from the BLM Salem District Office, P. O. Box 3227 (1717 Fabry Rd. SE) Salem 97302.

I am very cheered that the FWS concurs with the NPSO's assessment of the value of this parcel and I fully expect to hear soon that the BLM will be retaining the property and providing a management policy that will protect the Sidalcea.

Sidalcea nelsoniana. I have before me a 1957 monograph by C. L. Hitchcock and A. R. Kruckeberg of the University of Washington entitled "A Study of the Perennial Species of Sidalcea", U. of W. Pubs. in Biol., Vol. 18, UW Press, Seattle. In this publication, Hitchcock and Kruckeberg report on their taxonomic and cytological investigations into this rather difficult genus in the family Malvaceae.

The genus Sidalcea is restricted to western North America. It is a troublesome group to taxonomists because there appear to be few barriers to interspecific hybridization and a lot of phenotypic variation. Chromosome numbers in the genus vary from 20 through 40 to

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60, but Kruckeberg has shown through hand crosses that differences in chromosome number between species is no barrier to crossing or to the production of fertile offsring.

Sidalcea species are difficult to identify because there is considerable variation in flower size within species and because flowers are dimorphic. Some flowers are perfect and some are pistillate and these vary in size.

Of S. nelsoniana Hitchcock writes: the species is "very occasional in the Willamette Valley, Oregon from Linn County to near Portland and west...usually on gravelly, well-drained soil...There is cause for wonder at the comparative rarity of this species. Although it has been collected in only a few localities, these collections are notably similar. It therefore seems certain that S. nelsoniana is a genetic entity..."

Kruckeberg, using root tips of greenhouse-grown plants, determined that S. nelsoniana is a diploid with 2N=20.

The species is now even more rare than when Hitchcock and Kruckeberg wrote in 1957. At present the Monroe Parcel population is one of only two on public land. The other is on the Finley Reserve. David Wagner of the University of Oregon Herbarium is now investigating a Sidalcea found at Willow Creek in Eugene which resembles S. nelsoniana.

It is clear from the above that this plant deserves listing under the Federal Endangered Species Act as well as protection by some form of Oregon State legislation. In addition, the remaining populations could benefit from close ecological and cytological study so that the species can be better understood.

I want to thank all NPSO members who wrote letters this spring concerning S. nelsoniana and the Monroe Parcel. As soon as the final disposition of the property is known, Bulletin readers will be informed.

To the Native Plant Society of Oregon:

Mr. M.D. Fahey's letter in the June issue has raised again, with good intentions, the important issue of wildflower shows, or the real issue: for what causes should wild flowers be picked or sacrificed? As a professional botanist, I've seen this and similar issues raised many times. I will therefore again express my opinions.

Wildflower shows should not only be continued, they should increase. They are a very important tool in educating the public about the beauty of natives. They make people aware of what is out there. Even as one who spends a good portion of his working time and leisure time educating people about plants and learning about them myself, I was greatly impressed with the Glide Flower show some six years ago. I learned a lot. People were excited about plants. It was contagious!

Yes, some plants were sacrificed. Why is this important? Some of our legislators and government bureaus do respond to requests from their constituents. People won't make requests unless they feel strongly about an issue. Flower shows are a tool that works to make people feel strongly. More green things that fly by as one races down the highway become friends to be watched for, or even to go out of one's way to find. Flower shows reach more people than most other means.

What are the real enemies of plants which these few sacrificed plants help fight?

One development, one new desert land entry (yes, they still do occur in Oregon and Idaho), one herd of cows, one bulldozer doing what our antiquated mining laws say is its right (in fact, the laws demand that the operator do $100 worth of destruction each year to keep the claim legal); yes, even a new power or flood-control dam destroys more plants than all the flower shows in the U.S. combined.

Next time you attend a good wildflower show, watch the people who attend. Watch the people who worked so hard. They are excited. They are proud of their accomplishments. They feel they are doing an important job. Indeed they are! They are doing more than those who sit back and critique and do little that is positive, in most cases.

Finally, why do we have such a reverence for orchids? They are far more abundant than many other plants, in many cases. How many are on our T & E lists? Almost none!

Of course, plants on the Rare, Threatened, and Endangered lists should not be collected. Laws should be obeyed! At an otherwise good flower show, a picture display of these will cause not only good interest, but will help protect them--protection they otherwise might not receive.

Sincerely,

Karl E. Holte, Ph.D.
Dept. of Biological Sciences
Idaho State University
Pocatello, ID 83209

Temporary address:
1058 N. Egan #7
Burns, OR 97720

R/E News

"FIRST RECORDS IN OREGON" - Additions to the Oregon flora

In the past several years, quite a few species have been found in Oregon which previously were not known to occur in this state. For the next several months, we will be reporting some of these discoveries, as many of them have been added to the Oregon R/E Review List.

Our first two "first records" are two members of the lily family which Julie Kierstead found in the Bull Run area of the Mt. Hood National Forest in 1982:

FRITILLARIA CAMSCHATCENSIS, Indian rice

According to Hitchcock, et al., 1969, the known range for this species is "Kodiak I. and coastal Alas. s. to Vancouver I. and mainland B.C. to Whidbey I. and c. Snohomish Co., Wash." Julie found it in a marsh near the North Fork Reservoir of the Bull Run River. To date, this is still the only site known in Oregon.

When first seen in the Fall of 1982, it was already in fruit, but its capsule is not winged as those of Fritillaria lanceolata and F. atropurpurea are. The flowers are more narrowly campanulate than either of the other two, and the perianth is not mottled. The color can apparently vary. Those in the Bull Run are a brownish purple inside and out; the tepals on the ones I saw on the Stikine River in Alaska had greenish backs.

Fritillaria comschalcensis

STREPTOPUS STREPTOPOIDES var. BREVIPES, Kruhsea

According to Hitchcock, et al., 1969, the known range for this lily is "Alas. to the Olympic and Cascade Mts., Wash, e. to e.B.C. and n. Ida.; Asia ." It was first collected by Julie in the old growth forest above Fir Creek west of Big Bend Mt. It has since been found at four other sites, all in the Bull Run watershed.

It was the big red berry on so small a plant (most are less than 4" tall) that first attracted Julie's attention. The green fruits, however are quite triangular in shape. The flowers are also distinctive, but they are on the underside of the stem, so often go unnoticed.

In my search for this taxon at other sites in the Bull Run this summer, I found that the young plants of Smilacina, Disporum and the other species of Streptopus look exactly like it, and since these often do not bloom, or if they bloom, do not set seed, I had to find a way to tell them apart on the basis of vegetative characters. This resulted in the following chart which compares the leaf and stem pubescence of all three genera. It has been field tested for a month, and is standing up to the test. It is reproduced here for anyone else who finds themselves in this dilemma.

Streptopus streptopoides

STREPTOPUS-SMILACINA-DISPORUM COMPARISON CHART

Jean L. Siddall
June 1984

	leaf margins "ciliate"/smooth	"fringed" at nodes	stem pubesc/glabrous	stem simple/ branched	mature height	flowers	mature berry
STREPTOPUS STREPTOPOIDES var. BREVIPES*	smooth	fringed	glabrous	simple	1-2 dm.	rotate	red, few seeds, 5-6 mm.
STREPTOPUS ROSEUS	"ciliate"	fringed	glabrous	simple (branched)	1.5-3 dm.	campanulate	red, few seeds, 5-6 mm.
STREPTOPUS AMPLEXIFOLIUS var. AMERICANUS	minutely "ciliate"	no fringe	coarsely pubescent on lower 1/3	usually branched	(3)5-12 dm.	jointed pedicle	yellow-red ∞ seeds, 10-12 mm.
STREPTOPUS AMPLEXIFOLIUS var. CHALAZATUS**	smooth	no fringe	glabrous	?-(all seen have been simple)	presumably (3)5-12 dm.	jointed pedicle	?
SMILACINA STELLATA	ciliate	no fringe	glabrous to pubescent	simple	2-6(7) dm.		dark red 7-10 mm.
SMILACINA RACEMOSA	ciliate	no fringe	finely pubescent	simple	3-9(10) dm.		reddish 5-7 mm.
DISPORUM HOOKERI var. OREGANUM	ciliate (hairs point forward)	no fringe	pubescent	branched	4-8 dm.		
DISPORUM SMITHII	glabrous (leaves shiny)	no fringe	single line of hairs	branched	2-9 dm.		

*Streptopus streptopoides, on the Oregon R/E list, is the only one with smooth leaf margins and a fringe of hairs on the stem opposite the leaf.

**S. amplexifolius var. chalazatus also has smooth leaf margins, but does not have a fringe of hairs on the stem opposite the leaf, and the leaves are semi-clasping. I found it in the Bull Run while searching for S. streptopoides. Its known range is "Alas. s. to n. Oreg., mainly e. of the Cascades..." (Hitchcock, et al.). This may be based on the type locality at Wallowa Lake. More work is needed to determine its status in Oregon. Let me know if you have seen it.

Illustrations on the facing page by Jeanne Janish, from Hitchcock et al., Vascular Plants of the Pacific Northwest, volume 1.

Discovery & Naming of the Oregon Endemic Genus Kalmiopsis

Between the June 1930 discovery, in the Siskiyou Mountains of Curry County, Oregon, of a new Oregon flowering shrub and the appearance of a valid name and full description in the scientific literature, there were but two seasons of field collecting in Oregon. In that brief time, however, there were many letters exchanged between its first collectors, Lilla and John Leach, with their Oregon supporters and with the describers and namers at Harvard University. The correspondence of the Leaches in those two and a half years, with their colleagues in the Willamette Valley and with the Harvard botanists, reveals many fascinating details of description and nomenclature. When, in addition, we examine the auxiliary correspondence of those field botanists with their western friends and with other American and European botanists, all interested in early acquisition of the new Oregon discovery, we find a complex tapestry of botanical events with human feelings woven into it.

Kalmiopsis leachiana

The correspondence of John and Lilla Leach and of some of their contemporary field scientists of the Pacific Northwest are available to readers on application at the manuscript reading area of the Special Collections division, University of Oregon Library. Here we are interested in the Leach partnership in the collecting of plant specimens, many of which are preserved in the Herbarium, Museum of Natural History, University of Oregon.

From a Leach manuscript which was eventually published as "Botanizing in Oregon's Hinterland", Mazama XX (12): 59-62, Dec. 1983, the following excerpts are valuable as preface to the discovery of kalmiopsis.

> Our first botany trip into Curry County started on June first, 1928 when we left our car at Galice, purchased Pansy and Violet and started down the Rogue River trail where the arrow pointing west read "Gold Beach 93 miles";...

From later references in the Leach manuscript we know that burros Pansy and Violet each carried as much as 125 pounds of duffle. They were Leach family members during the field collecting season in Oregon.

> Altogether we spent nine vacations in Curry County, from 1928 to 1938 and travelled about one thousand miles of trails. ...

They camped the night of June 13, 1930, just prior to their exciting discovery at a little glacial lake on a bench near the summit of Pearsoll Peak. The following morning, June 14th, they started on down the ridge toward Gold Basin. Lilla wrote this account:

> I was in the lead where I usually walk in order to get the first chance over the burros to anything of interest that might be growing when suddenly I beheld a small patch of beautiful low growing deep rose colored plants and because of its beauty I started running toward it and dropped to my knees... I had never seen anything so beautiful before. John came and started taking pictures while I examined it with a handlens. I believed it was new.

The partnership of John and Lilla Leach is noteworthy in these years of triumphant feminism, for John, a practising pharmacist on whose business stationery they each frequently wrote, thought of himself as a bring-up-the-rear assistant to Lilla, the botanist. His letter of December 15, 1928 to Dr. H. St. John, Washington State College, Pullman, describes his role with a humor I find typical of his own correspondence.

> Mrs. Leach is the botanist and will answer your letter after the holidays when she has time to go through the specimens and see what she can do for you. I am the mule skinner and hold sort of a top sergeant's position in the expeditions, acting mostly as a buffer between the botanist and the burro.

Lilla Leach's collecting notebook for the date June 14, 1980, has the penciled entry, "No. 2915 Rhododendron leachianum. Gold Basin."

From the Leaches' correspondence on record at the University library, it is clear that beginning in 1928 they had frequent correspondence with Professor Louis

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F. Henderson, Herbarium Curator and the chief field botanist at the University of Oregon's Biology Department from 1924 to 1939. By early 1931 Professor Henderson had received suitable pressed specimens of the new plant discovery from Curry County. The exchange of letters between the Herbarium Curator in Eugene and the Leaches became very frequent in 1931-1932. The letters quoted below are presented in their original wording and unaltered spelling, but all botanical names have been underscored.

Herbarium, Univ. of Oregon
April 10, '31
To Mr. & Mrs. Leach:

I know you are going to be disappointed when I tell you I had to revoke on that Rhododendron and rename it var. Leacheanum of R. Laponicum. I spent a few more hours on it lately, mainly with compound high power microscope. On looking at the leaves and flowers with this magnification, I find not only the same kind of lepidote, or scaly glands, but that the beautiful marking on these larger glands is reproduced on the glands of specimens from Norway and White Mts., N.H.! As a matter of fact, in scientific results of its wonderful dispersion, this plant of yours is far more wonderful as a variety than as a species.---
I sent off several things for publication in Rhodora, including your Rhododendron yesterday.

Yours very truly,
L.F. Henderson

Herbarium, University of Oregon
May 26, '31
Dear Mrs. Leach:

Professor Sweetser gave me your letter to file away, also photograph. Delighted to hear your R_____ is plentiful. Were you able to find any good fruit of last year? If so, please send me some, also what you can spare of flowers from the new localities.

I am sending you a letter from Rehder at the Arboretum (Harvard University). I don't agree with him, and still think the plant a var. of Laponicum, but the fruit and additional specimens from various localities may prove me wrong. I am going to wait answering him till I get your specimens for further study. If I then think he is correct shall insist he give your name to it. Please send spec. by return mail, as he is waiting to get my reply. Return me Rehder's letter also.

L.F. Henderson

From one of Lilla's notebooks there is the following notation after her collection number 3180:

May 1, 1931 Collier Bar Trail, Curry Co. growing on a dry side hill with other shrubs, elevation 750 to 1250 feet. At this place Kalmiopsis covered many acres, while at Horse Sign Butte, there was less than an acre where it grew.*

Herbarium,
June 2, '31
Dear Mr. & Mrs. Leach:

Your nice bundle of Rhododendron rec'd and thanks for the supply. Much of it was in good (last year's) fruit, and since putting another good day's work on it, I agree with Rehder that it is a good species as the fruit is very different from that of R. Laponicum. I am going to try to get off the new description today but as it is to be in Latin, I may not finish till tomorrow. It will now be Rhododendron Leacheanum. Shall send a good specimen to Mr. Fernald, Editor of Rhodora.

Yours truly,
L.F. Henderson

Herbarium
June 17, '31
Dear Mr. & Mrs. Leach:

I am enclosing a letter from Rehder. When read, please return same to me, as it is as yet unanswered. You see what messes people get themselves into when they discover new plants! Do you suppose you people will be able to get this when seeds are ripe in full, or nearly spring, when you could dig up some plants?

Yours truly,
L.F. Henderson

The letter from Alfred Rehder, Curator, The Arnold Arboretum, Harvard University, which Henderson apparently had sent to the Leaches in Portland, reads as follows:

May 20, 1931
Dear Professor Henderson:

With my best thanks I acknowledge the receipt of a fine specimen of Rhododendron lapponicum var. Leachianum. I was much astonished to find that it does not belong to Rh. lapponicum at all, but it is a species quite unknown to me and not related to any American species of Rhododendron. As far as I can see without having analysed the flower, it seems to have some relation to the Chinese Rh. ovatum; it also has resemblance to the European genus Rhodothamnus. I have notified Professor Fernald not to publish your new variety at present. Do you want me to study the specimen further or what is your intention in this matter? If possible, fruiting specimens should be collected of this highly interesting plant.

Sincerely yours,
Alfred Rehder, A.M.
Curator, the Arnold Arboretum
Harvard University

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From 1827, when Thomas Howell of Sauvies Island, Multnomah County, Oregon, first sent specimens of his own collection to Harvard for positive identification and description in science journals, Asa Gray, Director of the Harvard Herbarium, had been the principal author-describer for the field collectors of the Pacific Northwest. At first, and until his death in 1888, Gray had been North America's most distinguished plant taxonomist. By 1931 the Curator of the Harvard Herbarium, thence known as the Gray Herbarium, was Merritt L. Fernald. As the editor of Rhodora, the New England regional taxonomic journal, he directed the results of the western field collectors to publication in that journal.

Professor Louis F. Henderson had spent a sabbatical year, 1899-1900, at Gray Herbarium in association with Professor Sereno Watson, Asa Gray's immediate successor. Therefore, Professor Henderson at the University of Oregon Herbarium naturally turned for help to Fernald. Professor Henderson was the author of the first description of the Leaches' new plant. That description was published in Rhodora 33: 203-206, October 1931, under the title "New Plants from Oregon". The one of interest here was described as follows:

> Rhododendron Leachianum, sp. nov.
> This plant seems to stand very near to Rhododendron Lapponicum, but it differs in larger obovate to elliptic leaves generally perfectly smooth above or with few scales at the tip though very lepidote-punctate below; slightly wider corolla; calyx red and 3-4 mm long; pedicels merely glandular; and capsule hemispherical or even obcompressed, very different in form from the pyramidal capsule of R. Lapponicum.

The Arnold Arboretum, also a botanical arm of Harvard University, is in Jamaica Plain, a Boston suburb southwest of Boston and Cambridge. Alfred Rehder, curator of the Arnold Herbarium, and Professor M.L. Fernald apparently decided to use their joint expertise and enormous eastern-U.S. prestige to decide the identity of the new Oregon discovery of Lilla Leach. Professor Fernald wrote as follows:

> Gray Herbarium, Cambridge, Mass.
> June 9, '31
> Dear Prof. Henderson:
>
> Thank you very much for the beautiful material of Rhododendron Leachianum which is indeed a unique species.
>
> Mr. Rehder has brought the Arboretum material over, and we were both thoroughly convinced that this has nothing to do with R. lapponicum. I am glad, therefore to insert the new account in the place of the old one.
>
> Sincerely yours,
> M.L. Fernald, Prof. Nat. Hist.

A few days later Rehder wrote further:

> Arnold Arboretum, Harvard Univ.
> June 13, 1931
> Dear Professor Henderson:
>
> With my best thanks I acknowledge the receipt of a fruiting and a flowering branch of this year's collection of Rhododendron Leachianum. I noticed that the old fruits still contain

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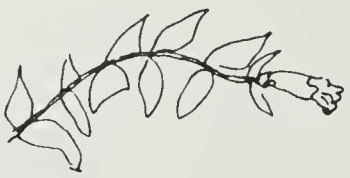
sepals 5
pistil 1
ovary superior
stamens 4

leaves opposite pairs
flower simple
plant tends to lie down



Nothochelone nemorosa
Woodland beard-tongue

Drawing by Katie Haggerty

Welcome New Members

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Anne Walton

Books

Reading Julie's "tirade" on the BLM Wilderness process, I was reminded of my intention to write a review of Denzel and Nancy Ferguson"s book, Sacred Cows at the Public Trough, released last winter by Maverick Publications*. Lack of both time and competence preclude a full-blown review. However, I want to ensure that this book doesn't escape the attention of NPSO members,although it seems unlikely that anyone who reads "The Oregonian" could be unaware of the book"s controversial nature.I can't recall another topic that has generated as many letters to the editor and "In My Opinion" pieces.

For me, one of the more compelling arguments in favor of Wilderness is that it allows us to set aside more-or-less intact ecosystems that provide for the continuation of natural evolutionary processes. Endangered species efforts focus on saving some of the actors in the "evolutionary play",Wilderness preserves the stage. There is a great irony in this, however, particularly in the shrub-steppe lands administered by the BLM. The activity that has done more to alter native ecosystems on these lands - grazing - was "grandfathered" in by the Wilderness Act. (By the way, it would be nice to have an all-encompassing, readily understood term, other than "rangelands" to refer to the bunchgrass-shrub country of the intermountain West. It's as though in discussions of old-growth forests we always had to use the term "timberlands" - the term presupposes the consumptive use.)

Sacred Cows at the Public Trough is a thoroughly researched, well-written and emotionally charged book that cannot be read with indifference. Those who profit from exploitation of the public's resources, and those thoroughly imbued with the myths of the American West will take exception. Those who care about native flora and fauna, soil, water or a balanced federal budget can only sense a growing anger at the litany of abuses of their lands. The Fergusons support their arguments with many statistics, but the book is far from dry; the details are leavened with both humor and anger. The text is also complemneted by Ginny Rosenberg's illustrations, which she uses to augment the narration, as well as to add her own sly humor.

One caveat - if you can never pass up a repeat of "Bonanza" or "The Big Valley", and if you believe that America has no heroes more worthy than the cowboys who"tamed" the West, you would do well to save reading the first chapter until last; by then you will better understand the sometimes polemical tone taken in addressing the myths of cowboys and their charges. Regardless of your current opinions on the matter, you can only benefit from reading this book. And if your resulting anger can be turned into constructive action, the land may benefit as well.

* Drawer 5007; Bend, Ore. 97708

Richard T. Brown
Portland Chapter

continued from page 10

some seeds, but could get from my small branch only a few seeds. You have possibly more seeds and if you could spare a small quantity I should be very grateful to you. We should like to try to raise plants of this very interesting new species and introduce it into cultivation.

I am glad to learn that it has been found abundantly in another locality, so that the danger of its becoming extinct is not so great.

Sincerely yours,
Alfred Rehder
Curator of the Herbarium

The correspondence of 1932 reflects the discovery in Curry County of many additional colonies of the new plant, and the appearance in print of Rehder's name as the author of the new genus from Oregon, replacing the new species of Rhododendron as described in Rhodora by Henderson.

In early February Lilla Leach wrote to Alfred Rehder as follows:

Portland, Oregon
February 4, 1932

In June we will go back to Curry County for our fifth season and hope to collect more of our other new genus Bensonia oregana Abrams & Bac.**, and if successful will be glad to send you a specimen. We might also get some live plants of the Rhododendron which we can spare you. We have found it growing in considerable quantities but it is very hard to get as it requires long pack horse trips and live plants are hard to bring out.

Three weeks later Lilla sent a letter of thanks to Rehder who had meanwhile sent her a reprint of his article describing Kalmiopsis, the new Oregon endemic, fully cited below.

To Dr. Alfred Rehder, Febr. 26, 1932

We are delighted with the new genus Kalmiopsis Leachiana and thank you kindly for the separate. The plate is very fine indeed.

Yours sincerely,
Mrs. John R. Leach

In late July Lilla wrote again to Rehder:

Alfred Rehder July 22, 1932

Attached are some seed and specimens of Kalmiopsis leachiana which we collected this year on top of Big Craggy, dry rocky soil, elevation over 5,000 feet June 12. It was too late to get good specimens.

The finally acceptable description of the new Curry County plant, making it a recognized new genus, was authored by Alfred Rehder with the full title "Kalmiopsis, a new genus of Ericaceae from Northwest America", Journal of the Arnold Arboretum XIII: 30-34, 1932.

continued on page 12

Thus one of the most recent, perhaps the latest Oregon plant to be given rank of a new genus resulted from the friendly cooperation of its discoverers, the Leaches of Portland, Professor Henderson, the facilitating correspondent of Eugene, and namers-describers at Harvard University herbaria.

The final letters of this history make a meaningful postscript to the foregoing text, because they indicate both successes and failures in the struggle to introduce kalmiopsis into cultivation at gardens and arboreta where simulated native conditions were possible. Probably as a consequence of Professor Henderson's brief note in Rhodora in late 1931, Lilla Leach had by mid-1932 requests for seeds and plants from curators of Kew Gardens, London, from Berlin and from Edinburgh. The The following letters illustrate something of the long arms and influences of Harvard botanists.

Arnold Arboretum March 18, 1936
Dear Mrs. Leach:

The seedlings of Kalmiopsis Leachiana grow very slowly and it will probably be several years before they are old enough to bloom but we have a plant received from Mrs. J. Norman Henry, Gladwyne, Pa., which is a little older and may bloom sometime soon.

Rehder

We are left with only speculations on how Mrs. Henry acquired her stock/seeds of kalmiopsis.

To Mrs. Leach from Royal Botanic Garden,
Edinburgh, Scotland
14 April 1936

Bensonia was dead on arrival, and the Kalmiopsis so far spent that I doubt very much whether it will recover.

Wm. W. Smith, Keeper

To Mrs. Leach March 27, 1940

Kalmiopsis seems to do well in England, and there is a photograph of a flowering plant growing at Musgrave, Surrey in New Flora and Silva 9:251, figure 77 (1937).

Rehder

An indignant note to the writer of a popular news story adds a very humorous conclusion and reveals Mrs. Leach as a proud and very human plant scientist.

6615 S.E. Foster Rd., Portland
Jan. 24, 1939

Mr. T.H. Sherrard
P.O. Building, Portland, Oregon
Dear Mr. Sherrard:

Kalmiopsis Leachiana Rehd. has been erroneously called Rock Rhododendron. Since this plant belongs to the genus Kalmiopsis, it can not also belong to another genus Rhododendron. To call a plant by the wrong generic name is unscientific and very misleading.

continued on page 13

bellflower
Campanula scouleri

Drawing by Katie Haggerty

* * * * * *IMPORTANT ADDRESSES* * * * * *

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.
Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.
Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.
Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.
Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.
Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.
Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.
Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.
William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.
Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

* *

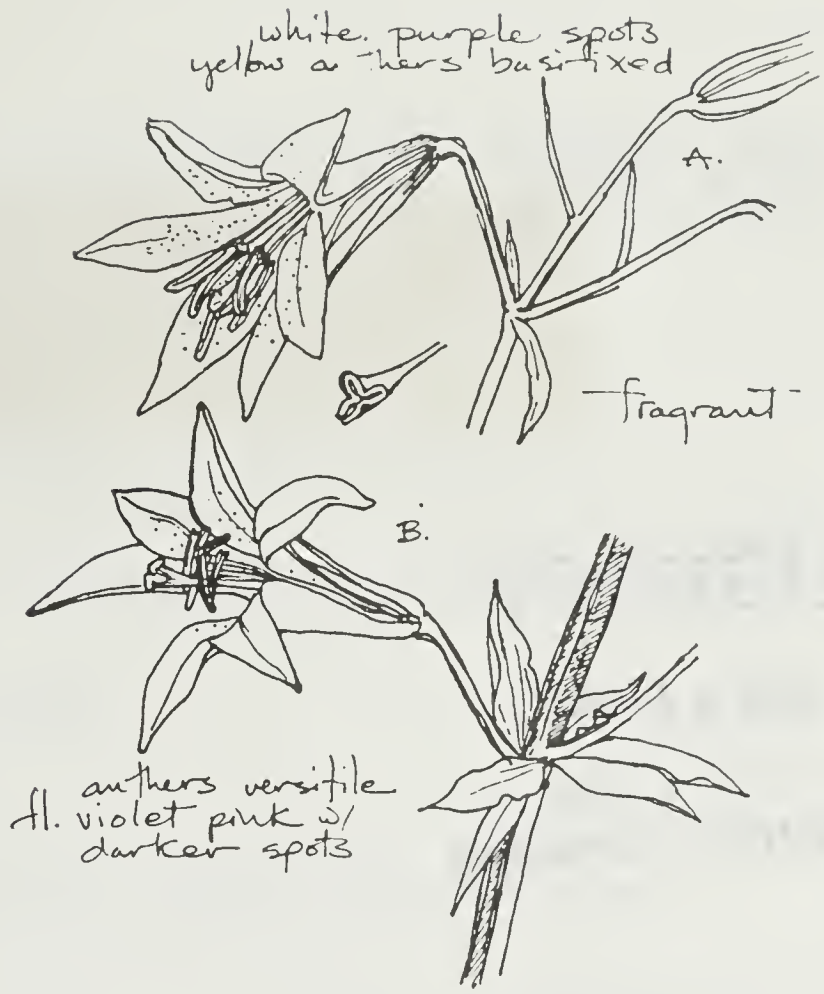
This plant was named Kalmiopsis by Dr. Rehder of Harvard University because it resembled Kalmia more than any other genus. May I suggest that it be called by its generic name Kalmiopsis which is no harder to say than Rhododendron, and while there are hundreds of Rhododendrons, there is only one Kalmiopsis.

Yours sincerely,
Mrs. John R. Leach

*This entry was apparently written in later, as the plant was still considered a Rhododendron at this point.

**Now Bensoniella oregona (Abrams & Bacigalupi) Morton

Edward P. Thatcher, Emeritus Professor, lives in Eugene.



Lilium washingtonianum
Washington lily

Drawing by Katie Haggerty

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Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 9 September 1984

CHAPTER NEWS

Blue Mountain

--- For information about September activities, call Chapter President Harry Oswald, 276-1241 (days).

Corvallis

--- No September meeting.

8 Oct., Mon. Meeting, 7:30 p.m., Rm. 2087, Cordley Hall, OSU campus, Corvallis. MUSHROOMS & THEIR HABITATS IN CHINA, by visiting scientist Wang Yun.

27 Oct., Sat. Field trip--CASCADES MUSHROOM FORAY. Leave from parking lot at NE corner of Cordley Hall at 7:00 a.m. Call Dan Luoma (758-8063) for details and car pool arrangements.

Emerald

10 Sept., Mon. Meeting, 7:15 p.m., Rm. 21, Science II, U of O campus, Eugene. Evelyn Hess: A TOUR OF THE UNIVERSITY GREENHOUSE.

--- For information about September activities, call Chapter President Marge Ettinger, 382-2255.

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Mid Columbia

5 Sept., Wed. Meeting, 7:30 p.m., Mosier School.

Portland

Our field trip meeting place is the K-Mart at NE 122nd & Sandy Blvd. (exit I-84 at 122nd northbound and meet at the S end of parking lot). If you have questions about any field trip, please call the leader or Doris Ashby, 245-2977.

1 Sept., Sat. No field trip scheduled.

8 Sept., Sat. BOTANIZING & HUCKLEBERRY PICKING TO KINZEL LAKE. We will start our trip at Summit Meadows and continue along the Sherar Burn Road, with stops to botanize and pick huckleberries. Bring berry picking pots, waterproof boots or tennis shoes, and an appetite for a good natural food. Meet at K-Mart at 8:30 a.m., or the Zigzag Ranger Station at 9:30 a.m. Leader: Barbara Fox, 659-2445.

11 Sept., Tues.	Meeting, 7:00 p.m., First United Methodist Church, 18th & Jefferson, Portland. GARDENING WITH NATIVE PLANTS, by Stan & Doris Jewett.
15 Sept., Sat.	MAGNESS MEMORIAL TREE FARM. This property was donated by the Western Forestry Center by Mr. & Mrs. Howard Magness, charter members of NPSO. Our two-hour tour will start promptly at 10:00 a.m. There is a 75¢ fee. Drive 5.4 mi. S of Sherwood on SW Ladd Hill Rd. From Wilsonville (5.8 mi.) take the I-5 exit westbound, turn right on Edminston Rd., and right on SW Ladd Hill Rd. Leader: Florence Ebeling, 244-4122.
22 Sept., Sat.	INDIAN MOUNTAIN. Enjoy the fall colors and flowers on a moderate hike (816 mi. and 1400 ft. gain). Carpool at K-Mart at 7:30 a.m. Leader: Joyce Beeman, 639-3353.
29 Sept., Sat.	OBSERVATION PEAK. Another moderate hike for fall colors, scenic views, and maybe some late huckleberries. Meet at K-Mart at 8:00 a.m. Leader Doris Ashby, 245-2977.
6 Oct., Sat.	CASTLE CANYON. This very steep trail climbs among rock spires for 850 feet in less than a mile. Leader: Shep Wilson, 228-7823.

Siskiyou

---	No field trips this month.
13 Sept., Thu.	SUMMER'S END SLIDE SHOW, at Andy Kier residence, 134 Church, 7:30 p.m. Bring your best shots, plus side dish and/or barbecue.

Willamette Valley

---	No field trips scheduled for September.
17 Sept., Mon.	Meeting, 7:30 p.m., in the Carrier Room of the First Methodist Church, 600 Church St. The program is FIELD TRIP FLOWERS, a collection of slides by Wilbur Bluhm.

WASHINGTON RARE PLANT LIST AVAILABLE

Endangered, Threatened & Sensitive Vascular Plants of Washington, published in June, 1984 by the Washington Natural Heritage Program, is available for free by writing to them at the following address:

Washington Natural Heritage Program
Department of Natural Resources
Mail Stop: EX-12
Olympia, WA 98504

Please note, this is a new address for WNHP.

ERRATUM

The fourth paragraph, second column on page 8 of the August 1984 Bulletin should read (in part):

"Lilla Leach's collecting notebook for the date June 14, 1930, has the penciled entry..."

The date was erroneously given as 1980, to the confusion of many readers.

BLM PUBLIC COMMENT OPPORTUNITIES

The following schedule lists opportunities for public involvement in Oregon BLM planning, environmental impact assessment, decision-making, and comments on proposed regulations. Copies of published documents, and specific dates, times, and locations for public meetings are available from appropriate district offices.

BURNS--The John Day draft resource management plan/environmental impact statement 90-day comment period closes Sept. 13.

MEDFORD--The Medford (district-wide) Rangeland Program Summary will be available in early Sept. for a 30-day public comment period.

COOS BAY--The land use plan amendment and environmental assessment for the North Spit of Coos Bay 60-day public comment period closes Oct. 1.

QUOTABLE QUOTE FROM HARNEY COUNTY

"Like one of my neighbors said, when you have carp in your upstairs bedroom, you're flooded," Shirley Moore said.

FLOWERS FOREVER

by Rhoda Love

THE FIRES OF YESTERYEAR

The Kalapuya Indians vanished from the Willamette Valley over a century ago, but their "land use practices" still influence the dynamics of plant geography which we botanists and ecologists must deal with today.

Two different experiences of mine in the past weeks have served to remind me of the way in which the activities of the native people of our valley altered vegetational patterns and how interruption of their practices affected these patterns.

The Kalapuyas were apparently never very abundant; they did not have permanent settlements, nor did they practice agriculture, yet their activities profoundly influenced Willamette Valley ecology. I refer, of course, to their well-documented practice of setting fire to the valley floor each year in late summer or early autumn.

David Douglas, the Scottish botanist, has left us a clear word picture of the Valley which he walked through in September, 1826 on his way from Fort Vancouver to the Umpqua River in search of the sugar pine. He wrote in his diary for September 27 from near present-day Salem, "Country undulating; soil rich, light, with beautiful solitary oaks and pines interspersed through it, and must have a fine effect, but being all burned and not a single blade of grass except on the margins of rivulets to be seen."

The prairie fires set by the Indians each year, presumably to aid hunting, killed all but the old well-established oaks and firs. In fact, the fires were responsible for the Valley prairies which the white settlers found here when they began to arrive in numbers in the 1840's.

By the early 1850's, the Indians' practice of burning had been forever halted and within a very few years, any part of the prairie which was not plowed or heavily grazed began to undergo succession, with thickets of shrubs and young oak trees growing up very quickly.

The hillsides to the east and west of the Valley had likewise been influenced by the fires which swept up beneath the trees, killing the undergrowth and leaving open, park-like woodlands. Only the summits of the highest hills were crowned with Douglas fir. These hillsides, too, changed drastically when the annual burning stopped. The Douglas firs rapidly colonized the openings and the hillsides quickly became closed coniferous forests.

There are several excellent references which detail these historical changes in Willamette Valley vegetation. One of the most accessible and most succinct is Jerry Towle's "Changing Geography of Willamette Valley Woodlands" in the Oregon Historical Quarterly, Spring, 1982.

To return to my own recent experiences. I am a member of The Nature Conservancy Stewardship Committee for Willow Creek Natural Area in southwest Eugene. Willow Creek is a tract of former prairie that was certainly open and treeless at the time of white settlement. The native grasses and prairie species such as Deschampsia cespitosa, Aster curtus, Erigeron decumbens, and Lomatium bradshawii attest to its past history. Lately the tract has been left untouched and woody plants have moved in--principally Oregon ash and various shrubby species. The parcel has been set aside to preserve the native prairie species and we are now faced with the problem of returning the land to open prairie and maintaining it in that condition. Fire is the management tool chosen by the stewardship committee. In the coming years, the property will be burned in an attempt to remove woody plants. It will be interesting to see if fire can remove large ash trees without harming native grasses and wildflowers. I'll be following this experiment with much interest.

My other encounter with the results of Indian practices and their aftermath was my recent search for Hieracium parryi. This native hawkweed was collected in 1941 on Sec. 6, R4W, T18S in the Crow area a few miles southwest of Eugene. I spent several days combing the south-facing hillsides of the section where the plant was originally collected in oak woodlands and thickets. What I found was that on ungrazed hillsides, the oak woodland has given way to Douglas fir forest. Only where grazing has been heavy is the forest still open and dominated by oak. Hieracium parryi is a California species which gets into southwest Oregon. Presumably the Indian burning kept the south facing hillsides near Crow open and dry much like the brown hills dotted with oaks one sees in Douglas county near Roseburg. I did not find the hawkweed near Crow and it seems more than likely that its habitat has vanished as the hillsides have changed from oak woodland to coniferous forests.

Please turn to page 7

Nomenclature in Kalmiopsis

Excerpted from an article of the same title, in Bulletin of the American Rock Garden Society, vol. 25 no. 3, July, 1967; reprinted with permission of the publisher.

The state of confusion regarding the correct application of cultivar names of *Kalmiopsis*, voiced both here and abroad, has led to a perusal of the original circumstances of their application in an effort to clarify the unfortunate situation. Such terms as "var. M. le Piniec", "Umpqua River (or Valley) form", and "le Piniec form", are in common usage though never having been properly defined, it has been revealed, all really mean nothing.

This plant, originally named *Rhododendron leachianum* by Henderson (*Rhodora* 1931) was redescribed by Rehder (*Journal of the Arnold Arboretum*, v. 13, 1932) as *Kalmiopsis* (an allusion to its great resemblance to *Kalmia*) *leachiana*, to commemorate its discoverers, Mr. & Mrs. John Leach, of Portland, Oregon. Their find, in 1930, and the subsequent introduction into the garden shortly thereafter (about 1933) attracted considerable attention in both botanical and horticultural circles the world around. Certainly, both its differences from *Kalmia* and particularly from *Rhododendron*, as well as the habitat, unique from either, sets it quite apart, and there is no argument that *Kalmiopsis* does not constitute a genus of its own, monotypic and restricted to endemic distribution. The later name *Rhodothamnus leachianus* Copeland (*American Midland Naturalist*, 1943) has not met with much acceptance.

Governmental agencies set aside, as the Kalmiopsis Wild Area, a large tract within the drainage of the Chetco River basin of southwestern Oregon, thought to contain the sole habitat of this new plant, the area the Leaches had traversed in their explorations. (Recently this has been enlarged to become part of the Big Craggies Botanical Area, a nature preserve for all forms of wildlife.) Some later discoveries increased the known range of *Kalmiopsis* to include several tributaries of the Illinois River, that being a major branch of the Rogue River system and just immediately to the north of the Chetco, yet all these various stations are quite within Curry County and, in fact, scarcely separated.

About thirty years following the Leaches' original discovery, Marcel le Piniec, then of Jacksonville, Oregon, made the discovery of a further disjunct colony, this one nearly a hundred miles to the northeast and on the drainage of the North Umpqua River in Douglas County, Oregon. Several nearby stations have been reported, again only scarcely separated and constituting a scattered colony on a single enormous serpentine formation, at various exposures and elevations. The first publication of this colony appeared as a note from Mrs. A.C.U. Berry, of Portland, Oregon, in the *Bulletin of the Alpine Garden Society* (v. 28 no. 1, p. 23, March 1960) with photograph, and referred to the plant as *Kalmiopsis leachiana* var. *M. le Piniec*.

"Lilla Leach with ***Kalmiopsis*** bouquet, Horse Sign Butte, May 1, 1931. *Photo Courtesy of the University of Oregon.*

To quote a personal letter from Mrs. Berry (autumn, 1965) describing the trek to the colony, "We went to meet Mr. le Piniec and he took us up the Umpqua--way up; it was quite a climb, and the Kalmiopsis grew in shade, in sunshine and some just scrambling over the rock faces, roots so embedded that only one plant could be pried out intact--we divided it three ways. Mine grew well and was illustrated in the Alpine Society *Bulletin*. It had seeds--they were already forming when the plant was taken--so I sent them to the Scottish Rock Garden seed exchange, calling it var. *M. le Piniec*, hoping for his sake that the name would "hold" to commemorate his find. Plants (propagated vegetatively later) were sent to the Royal Botanic Garden in Edinburgh and to (others) in Scotland and in England."

Clearly, this name as applied referred to the clone as the horticultural "variety" and was not intended to designate a botanical variety as the Douglas County plants, either of the station or in total. The plant in Mrs. Berry's garden, now grown to considerable size, and the propagations from it sent to Edinburgh are properly the "type" for the name, and seedlings grown from it cannot correctly bear the clone name 'M. le Piniec'. There is an error in the report, following Mrs. Berry's note, to the effect that the plant occurs on the Rogue River; it was, of course, the North Umpqua. *Kalmiopsis* is not a protected plant there, and has been ravaged by indiscrim-

Please turn to page 7

Books

The Pinon Pine, a natural and cultural history, by Ronald Lanner, 1981, University of Nevada Press, Reno.

This book is obviously the product of a lifelong interest in and love affair with trees. It belongs on the bedside table of those NPSO members who venture south and west from Oregon in search of botanical adventure. Halfway through Nevada one begins to encounter pinyons, and soon to suspect that they figure heavily in the region's history. This book is an excellent introduction to the depth of than relationship.

The author is a Professor of Forestry at Utah State who has the breadth of interest and talent to interpret complicated situations for the general reader. He has an inquisitive mind, and shares his detailed knowledge of the pinyon pine.

The reader learns that pinyon taxonomy is somewhat controversial because it deals with a complex group which is evolving rapidly in inaccessible areas.

Dr. Lanner explains that the two most common taxa (*Pinus edulis* and *P. monophylla*) have evolved in response to differing climates. *P. edulis* prefers the summer-rainfall areas in Colorado, New Mexico, and Arizona, while *P. monophylla* likes the more Mediterranean climate of Nevada and the Great Basin, with dry summers and wet winters.

The symbiotic relationship which the pinyon and the Native Americans enjoyed is a recurring theme in this 208-page book. In the same sense that the Plains Indians relied on the buffalo, the early inhabitants of the Great Basin were dependent on the pinyon. The ancient Navaho mashed the oil-rich *P. edulis* kernels to a peanut butter-like consistency and spread it on hot cornbread! It was one of the mainstays of their diet.

The Indians used the signs of a good or bad cone crop as a cue for family planning. The cones take two years to mature. Apparently, pregnancies could be deferred if it appeared a famine was coming.

The author also details the white Europeans' interaction with the trees, beginning with the large-scale denudation for charcoal production in mining camps in the 1800's and ending with the BLM's unenlightened policy of "chaining" the pinyons.

The details of the interdependence of the trees and birds are fascinating. The woodland corvids* have a relationship with the pinyon in which the tree feeds the birds and the birds plant the trees. An extensive bibliography and chapter notes allow one to extend his or her reading on any particular topic in the book.

The University of Nevada Press has done an excellent job. The illustrations, map, and graphs are appropriate, and the volume is a handsome one. This book deserves a wider audience. It speaks intelligently to a variety of cultural, historical, and botanical issues that many general readers would enjoy.

This book may be ordered from the University of Nevada Press, Reno, 89557. Cloth $13.50, Paper $8.50.

Stuart Garrett, M.D.
High Desert Chapter

**The family Corvidae includes crows, jays, and magpies.*

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Say what you will

How should the name *Dodecatheon* be pronounced? We have all been taught that it is proper in botanical names to place the stress whenever possible on the antepenult or third syllable from the end. Therefore most of us probably pronounce this epithet do-de-KAY-the-on, landing heavily on the "Kay" with a long "A". On the other hand the Greek word "dodeka", from which this name is partially derived, ends with a short "a", so perhaps we should more correctly speak of our emblem as do-de-KA-the-on with the "Ka" pronounced as in "cat" or "about". Another suggestion was put forward by Claude A. Barr in his article "How Shall We Say Dodecatheon?" (American Rock Garden Society Bulletin Vol. 23, p. 33). He suggests that we should ignore the artificial ruling that the accent be on the antepenult and pronounce the name as it means--"twelve gods"--with "twelve" as the modifier and "gods" the emphasized word. Thus, when returned to the Greek, while still using the same emphasis, we end up with do-deka-THE-on (short "a", soft "th"), with the stress on the long "e" and a secondary accent on the first syllable.

As Claude Barr says in the same article: "In our botanical Latin we have, of course, endless precedent for compounding, or breaking up words, and placing the accent here or there; a freedom that would surely startle or horrify a classical Roman. One result of this, as expressed by a professor of botany: 'It is interesting to listen to a group of botanists in discussion; no two of them speak the same language.'" Yet they seem to be able to understand each other, so perhaps, fundamentally, it doesn't matter how we say *Dodecatheon*.

Excerpted from "Dodecatheon", in the American Rock Garden Society Bulletin, vol. 42, no. 2, 1984.

R/E News is good news this month--an account of the rediscovery of Amsinckia carinata through the clever sleuthing of Elaine Joyal. This species was discussed under R/E News in the February 1984 NPSO Bulletin.

THE REDISCOVERY OF AMSINCKIA CARINATA

Amsinckia carinata is alive and well "near Harper Ranch," Oregon! This rare and elusive species of Boraginaceae is a plant I was determined to search for in Malheur County, once I became aware that it had not been relocated since its original discovery by John Leiberg in 1896. However, the task at first seemed too daunting, because only by its nutlets (as viewed under a 10-power magnifying lens) could A. carinata be distinguished from several common, weedy Amsinckia species of that region. I needed some kind of a lead as to where, exactly, to make my search, and this was provided by the finding of an unmarked duplicate of the type collection (a so-called "isotype") in the Oregon State University Herbarium. Leiberg's collecting expedition of 1896 was already familiar to me, because I was interested in a species of Collomia which he found on that trip at a place he called "Barren Valley." In the process of doing some detective work to relocate the Collomia population, I had learned that Leiberg's journals and field notebooks are in the archives of the Smithsonian Institution. Using the data on the label of the isotype specimen of A. carinata, I wrote to the Smithsonian's archivist requesting a copy of the relevant pages of Leiberg's notebook. As it turned out, these notes provided the needed clues for a successful search near "Harper Ranch, Ore."--which was the brief and uncertain location given on the specimen label itself.

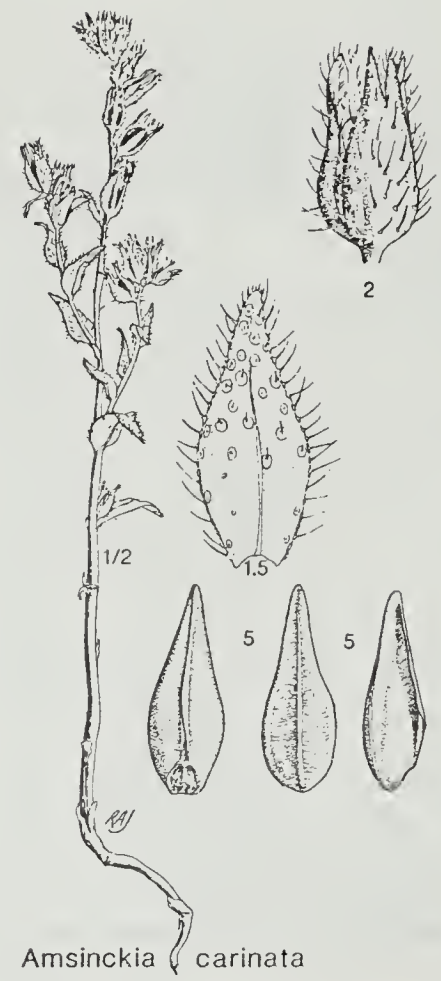


Illustration from volume 4, Intermountain Flora

In the article in which they described this species, Nelson and Macbride gave the elevation of the collection locality as "1100 feet." Leiberg's field notes, however, as well as the label on his isotype specimen, say it was at "1100 meters." This mistake in the published description had led previous botanists to survey lower elevation areas east of Harper. Using Leiberg's notes, I narrowed the search to an area "...about 18 kilometers S.W. from our camp..." (note: at Harper Ranch) "...embracing perhaps 75-90 square miles composed of serpentine rocks." Parenthetically, Leiberg's reference to "serpentine" is misleading, since there are no outcrops in that area of what geologists today refer to as serpentine (i.e. peridotite) rock formations.

With mileage costs and maps provided by the Vale District, Bureau of Land Management, I set off in June 1984--just 88 years after Leiberg's trip--to scout the area 18 kilometers southwest of Harper. In contrast to the usual basalt rimrocks that dominate the Oregon high desert, the hills of that region are composed of a light-colored welded tuff, set off occasionally by

pockets of deep black soil. Reaching Squaw Creek by a series of back roads, I spied several conspicuous rock outcrops and headed for them by driving north along the creek--only to find myself back at Highway 20 again! The outcrops are actually to the north of the highway, in township 20 south, range 41 east, sections 22 and 23. My climb at dusk to the top of the first hill rewarded me amply, for the upper slope was festooned with drying *Amsinckia* plants, shedding their year's production of *smooth*, *shiny* nutlets (the trademark of *A. carinata*).

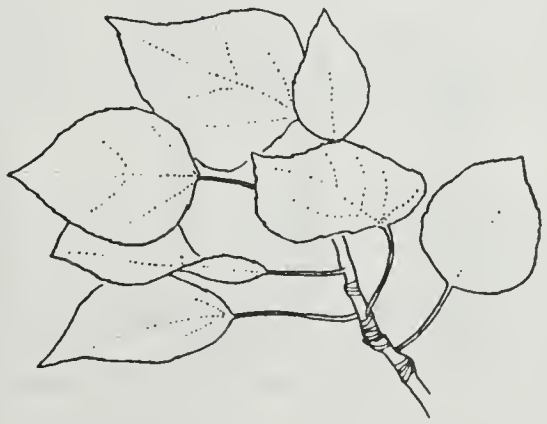
The next morning I climbed two adjacent hills and found more *A. carinata* at their tops. The species appears to occupy a unique ecological niche, in rocky soil derived from welded tuff parent material. It may be intolerant of disturbance, since it is entirely replaced by the weedy and widespread *Amsinckia tessellata* in grazed areas on the lower slopes of these tuffaceous hills. Knowledge of its habitat requirements, based on these observations, should be of help in searching for additional populations of *A. carinata* during future seasons of botanizing near "Harper Ranch, Ore."

Elaine Joyal
Spokane District, BLM

Continued from page 3

It may be difficult for us to realize that the activities of a rather small group of native people could so profoundly affect the vegetation of the valley. However, documentation of the role burning played in maintenance of these open communities is overwhelming. Fire has a profound effect on vegetation and it is therefore not surprising that we are still experiencing the effects of its earlier influence and later suppression on our flora, and that we are now experimenting with its use as a management tool.

I will keep Bulletin readers informed in these pages of the outcome of the burning experiments at Willow Creek. Results of these experiments should add greatly to our understanding of the role fire played in the past history of our Valley.



Continued from page 4

inate collectors who cannot be satisfied with anything less than a boxful.

The nursery firm of Saxton & Wilson, Maplewood, Oregon, is apparently responsible for the designation "Umpqua River form"; there is no evidence that all of their propagations were from a single clone, and therefore the name applies correctly to a "forma", whose members may vary somewhat among themselves. No "type" is designated...

Since taxonomists find no critical differences by which to segregate the Umpqua plants from those of Corry County, there is a need for a horticultural description to define "Umpqua River form". Nurserymen experienced considerable difficulty in the propagation of the Leaches' Curry County find and in the growing of the propagules to mature plants... By contrast, the Umpqua plants seem to root readily from cuttings and to be easily grown. Improved techniques and the wider understanding and use of rooting hormones, to say nothing of knowledge gained from the earlier failures, could account, at least in part, for this "apparent difference"...

There is probably a wider variation in the amount of pigmentation of the corolla among the Umpqua plants. Those from Curry County in gardens are almost of a non-varying strident rose-purple... A personal investigation into two or three reported stations for the Umpqua *Kalmiopsis* has yielded the knowledge of a good percentage of pleasing pastel "pink" plants to be found there.

Beyond these observations, it is not possible to write a description of "Umpqua River form" which would serve to characterize that entity as distinguishable from the "Curry County form"...

ARABIS IN SOUTHWESTERN OREGON

III. Hybridization & Reproductive Isolation

Linda Ann Vorobik, Emerald Chapter

My research on southwestern Oregon Arabis was aimed at answering two questions:

1) Are overlapping or sympatric populations of Arabis species hybridizing?
2) If these sympatric species are retaining their integrity as species, what reproductive isolating mechanisms are acting to prevent hybridization?

Hybridization is prevented either because pollination doesn't occur (pre-mating reproductive isolation) or because the parent plants don't form offspring, or the offspring are weak, sterile, or unable to compete with their parents (post-mating reproductive isolation). In this article I have summarized the results of my research of sympatric Arabis from four study sites in southwestern Oregon (see map).

Hellgate & Star Flat sites. At both the Star Flat and Hellgate sites, populations of A. aculeolata and A. subpinnatifida form overlapping patches on serpentine soil. There is very little overlap in the flowering seasons of A. aculeolata and A. subpinnatifida. Arabis subpinnatifida begins to flower in mid-February, peaking in mid-March. By the time A. aculeolata begins to flower, there are so few flowers on A. subpinnatifida plants that they are rarely visited by pollinating insects. The peak of A. aculeolata's flowering season occurs in early May. Flowering of A. modesta parallels that of A. aculeolata.

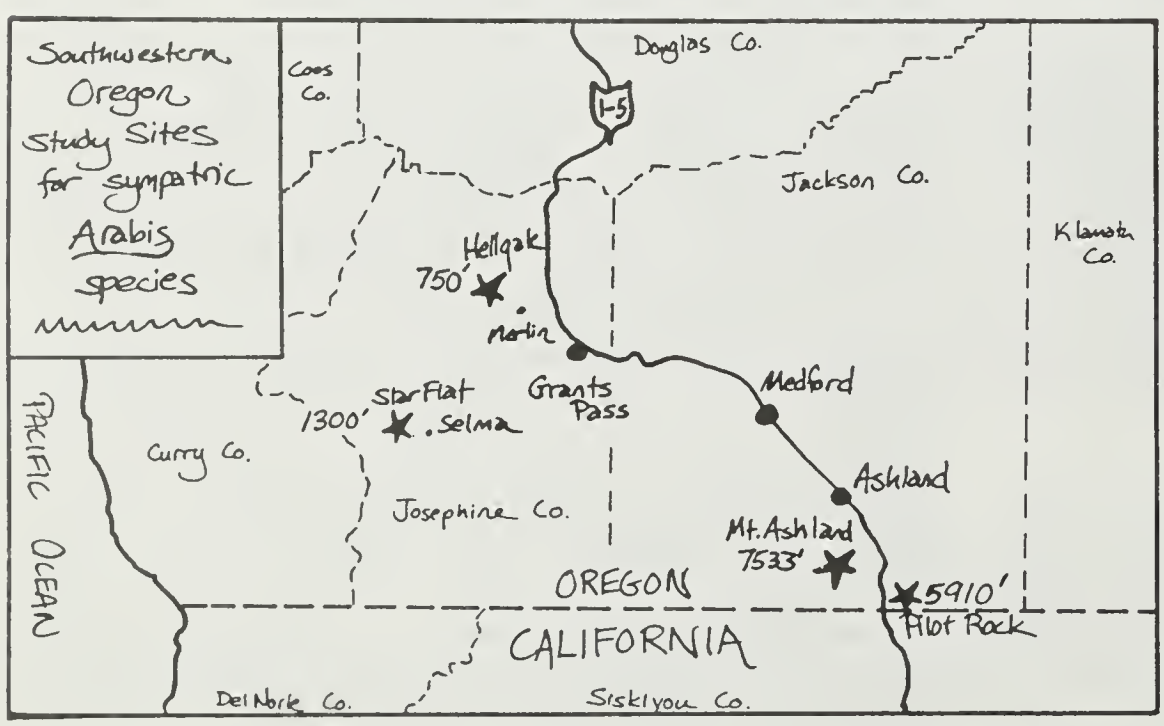
Arabis aculeolata tends to occur in slightly more mesic areas than A. subpinnatifida, which can be found on bare mineral soil. A population of A. modesta occurs on non-serpentine soil on the opposite side of the Rogue River from the Hellgate site, with the majority of A. modesta plants about three miles downstream from the A. aculeolata and A. subpinnatifida populations.

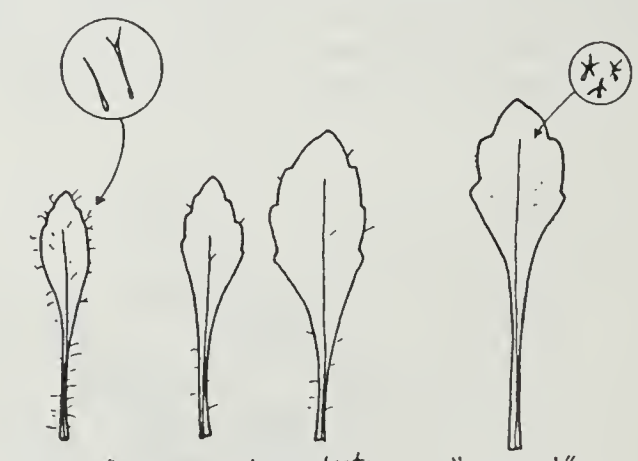
Arabis aculeolata and A. subpinnatifida are visited by an assortment of generalist bees and flies. A generalist pollinator is one which visits many different species of flowers. The occasional pollinators visiting late-flowering A. subpinnatifida when A. aculeolata had already begun blooming appeared to show some flower constancy; that is, the insects distinguished between flowers of the two species and tended to visit flowers of the same species consecutively, rather than switching back and forth between species.

Arabis aculeolata flowers

Arabis modesta flowers

Arabis subpinnatifida flowers





"typical" acul — acul-modesta "hybrid" — "typical" modesta

BASAL LEAVES from Hellgate Site

The flowers of A. subpinnatifida are self-fertilizing and will set fruits full of seeds in the absence of any pollinator. Because of this self-fertility, it is not known what percentage of seed set results from cross- vs. self-pollination during the pollinating season. Although the peak-season flowers are heavily visited by pollinating insects (including bumblebee queens!), the late-season flowers are rarely visited and seed set occurs by self-fertilization.

This contrasts with the self-incompatible breeding system of Arabis aculeolata, A. modesta, and A. oregana. Because the pollen from an individual plant will not germinate on that same plant's stigmas, these plants require cross-pollination for seeds to develop.

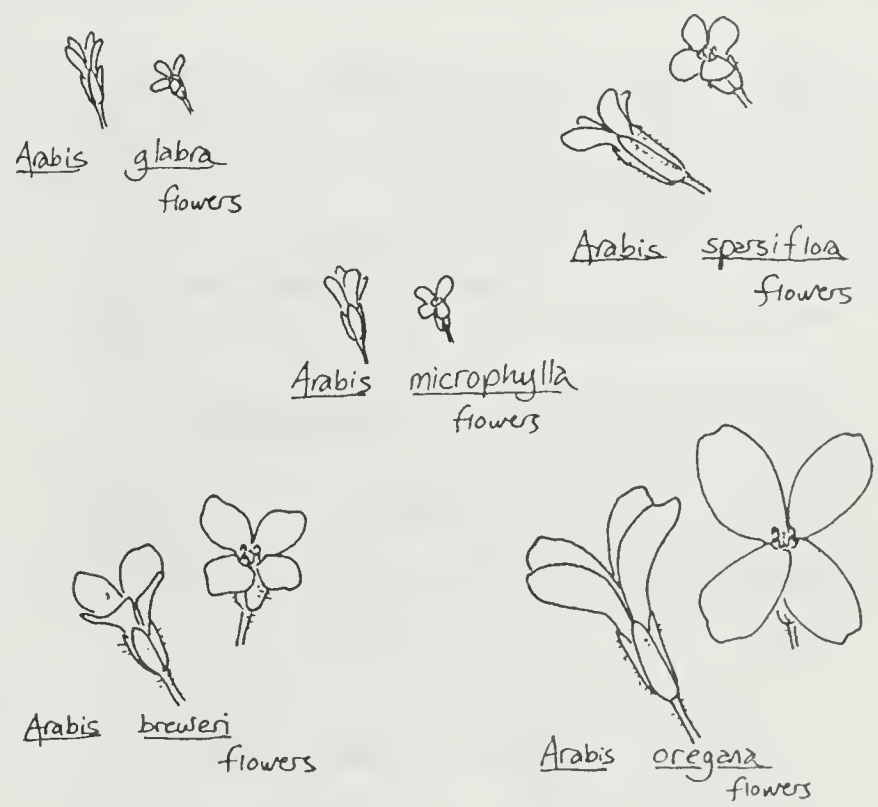
Greenhouse crosses between Arabis subpinnatifida and A. aculeolata do not set seed. In the rare event that cross-pollination between these two species occurred in the field, no hybrid seeds would be produced. This interspecific incompatibility is strengthened by a difference in chromosome numbers of the two species. A. subpinnatifida is a diploid with fourteen chromosomes; A. aculeolata is a tetraploid with 32 chromosomes. Hybrids between parent plants of greatly differing chromosome numbers are usually highly sterile. During normal sexual reproduction, matching chromosomes pair up before separating into two equivalent sets, so that the daughter cells, from which ovules or pollen grains later arise, each have half the original number of chromosomes. Thus when pollen nuclei enter the ovule at fertilization, the normal parental chromosome number is reconstituted. Plants with odd numbers of chromosomes or with unmatched sets (from parent plants of different species) form sterile ovules and pollen because the chromosomes fail to pair correctly, and fail to separate into perfectly matched sets.

Arabis aculeolata and A. modesta share the same chromosome number. Greenhouse crosses result in good seed set, and it appears that at the Hellgate site, where the two species occur next to each other, hybridization is probably occurring. The putative hybrid plants have tall stems and large leaves like A. modesta, but have pubescence like A. aculeolata and occur on serpentine. Instead of growing in the more open, exposed sites as Arabis aculeolata does, these hybrid plants grow under Ceanothus cuneatus (buckbrush) shrubs where the microclimate is cooler and moister, and more like the habitat of A. modesta. In general, hybrids often occur in disturbed areas; it is interesting that buckbrush is thought to invade after disturbances. Perhaps these shrubs have provided the intermediate habitat necessary for the hybrids' survival.

The main populations of Arabis aculeolata and A. modesta are separated by about three miles. I did find two plants, one A. aculeolata and one A. modesta, growing within one meter of each other at one site, but no intermingled patches of the two were found. Introduced honeybees, which are known to take long foraging flights, may act as a "pollen bridge" between populations of the two species.

I have concluded that Arabis subpinnatifida retains its species integrity and does not cross with A. aculeolata, even though the plants intermingle, or with A. modesta, which grows nearby, because of its earlier flowering season and consequent earlier flower visitation. This phenological reproductive isolation is supported by strong genetic barriers between A. subpinnatifida and both A. aculeolata and A. modesta, based on a difference in chromosome numbers. This same difference in chromosome numbers is probably acting as a reproductive isolating mechanism between A. aculeolata and A. koehleri var. stipitata (with 14 chromosomes), which grow together and have overlapping flowering periods at other serpentine sites.

Pilot Rock site. Five species of Arabis occur in the vicinity of Pilot Rock: A. microphylla on the cliffs of Pilot Rock itself; A. glabra, in small patches in forest openings; A. oregana, from the lower benches of Pilot Rock to openings in the forest in rocky shaded areas or north-facing slopes; A. sparsiflora var. subvillosa, in hotter, less rocky, deeper soils in a sagebrush association; and A. breweri, occurring in very small numbers in rock crevices or on talus slopes.



Arabis microphylla and A. glabra are very tiny-flowered and are fully self-fertilizing. A. microphylla blooms earlier than A. oregana, the only other Arabis growing in association with it. A. glabra is probably very rarely visited by pollinators because of its small flowers and few plants per patch. It also grows in a habitat isolated from the other Arabis species at this site. Arabis oregana, A. sparsiflora, and A. breweri occur in

closely adjacent or overlapping populations, and so were studied in more detail.

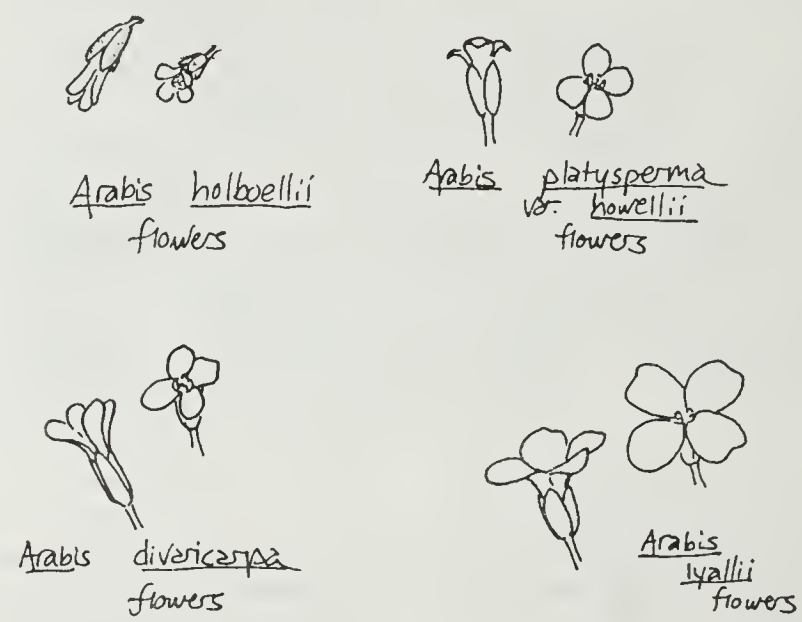
Plants at the Pilot Rock site experience a much shorter growing season than at the Star Flat and Hellgate sites. The season begins after snows melt and frost end, and ends when soils become too dry. In spite of this there is a separation of peak flowering times among A. breweri (late April to early May), A. oregana (early May), and A. sparsiflora (late May). The generalist visitors to these Arabis species again occur primarily during the peak of each species' flowering. A. breweri flowers early enough that visitors to its flowers probably do not visit those of A. oregana or A. sparsiflora. The overlap in flowering season between A. sparsiflora and A. oregana is such that both species are visited during a period of a few weeks. A. sparsiflora is rarely visited, and forms seeds primarily by agamospermy. This species has a triploid chromosome number; that is, it has three sets of chromosomes or a total of 21 or 22 chromosomes. Triploids are usually highly sterile for the same reasons that hybrids between parents with two different chromosome numbers are. A. sparsiflora pollen is often sterile, and it is probable that this population is reproducing by seed set without fertilization, which is called agamospermy. To circumvent the problems of sexual reproduction with a triploid chromosome number, an agamospermic plant develops seeds from a diploid cell in the ovary, not from the ovule. This cell already has two sets of chromosomes, so that fertilization is not necessary. Agamospermous plants are not reproducing sexually, so hybridization cannot occur.

The larger-flowered Arabis oregana is visited by honeybees, solitary bees, and flies. Bombylius flies drink nectar from flowers of both A. sparsiflora and A. oregana, and occasionally visit flowers of the two species consecutively. This lack of flower constancy is probably uncommon in insect visitors, but does account for a small amount of pollen flow between A. sparsiflora and A. oregana.

Hybridization between Pilot Rock species is also prevented by differences in chromosome number. A. oregana is closely related to A. aculeolata and A. modesta, with the same diploid chromosome number of 32. A. breweri (a probable close relative of A. koehleri) is a diploid with fourteen chromosomes. Hybrids between A. oregana and A. breweri, if formed, should be highly sterile.

To summarize the Pilot Rock site, A. breweri is reproductively isolated from A. oregana and A. sparsiflora by its early flowering season and difference in chromosome number. A. oregana and A. sparsiflora overlap in flowering season, but are reproductively isolated by rare flower visitation to A. sparsiflora, a difference in chromosome number, and the high probability of agamospermic (nonsexual) reproduction in A. sparsiflora.

Mt. Ashland site. Arabis species on Mt. Ashland include: A. holboellii var. retrofracta, common in dry, open areas above treeline; A. sparsiflora var. subvillosa, a few plants growing near A. holboellii; A. divaricarpa var. interposita, common from subalpine to alpine elevations in shaded to very sunny sites, often occurring with A. holboellii and A. lyallii; A. lyallii, occasional in subalpine, more often in alpine areas near edges of snow patches and near tree clumps; A. platysperma var. howellii, several small populations around the primary snowfield of Mt. Ashland; and A. platysperma var. platysperma, occasional on ridgetops in the vicinity. My study focused on the four most common species, A. holboellii, A. divaricarpa, A. lyallii, and A. platysperma var. howellii.



The flowering seasons of A. divaricarpa, A. platysperma, and A. lyallii all overlap considerably. They begin to flower early, with A. lyallii and A. platysperma the first to bloom--their flowering seasons peak in late June to mid-July (depending on the snow melt) as compared with late July to early August for A. holboellii. The flowers of A. holboellii are very tiny, about 4-5 mm, and although always infested with thrips (tiny pollen-eating insects), no pollinating insects were observed visiting them. Although thrips may be effecting some pollination, most of the seed set in A. holboellii probably is from self-fertilization, or possibly agamospermy, which is known to occur in this species.

The flowers of Arabis divaricarpa, A. platysperma, and A. lyallii are larger--up to 1 cm in A. lyallii--and are visited by Pieris butterflies, solitary bees, and syrphid flies. Most visitors were constant to one flower species in one flight, but a common visitor of solitary bee, Andrena nigrocaerulea, occasionally made consecutive visits to flowers of different species. In order for hybridization to be prevented, some reproductive isolating mechanism other than those preventing pollination between species must be at work.

The answer again appears to be agamospermy. Arabis divaricarpa and A. lyallii are both triploids with a chromosome number of 21 or 22. As in the case of

A. sparsiflora, pollen is not used, no sexual reproduction occurs, and no hybridization is possible. Although A. divaricarpa and A. lyallii pollen is usually mostly sterile, some fertile pollen grains do occur. One very intriguing question is whether any sexual reproduction does occur in these species, or whether all seeds are produced agamospermously. If some sexual reproduction did occur, then A. divaricarpa and A. lyallii could occasionally hybridize, assuming they are compatible enough to produce flowering hybrid offspring. With the inherited capacity for agamospermy, the hybrid plants could reproduce even if they were sterile.

The cycle of hybridization and production of agamospermous hybrid clones has been suggested by Dr. Reed Rollins, an authority on Arabis, and others for species complexes in Arabis where a broad array of very similar "microspecies" exists. It has also been documented in many other plant groups, including Poa, Rubus, and Crepis. This type of evolution yields the kind of variability that drives a botanist mad, whether he or she is trying to write a key to species or trying to use one.

Hybridization has been suggested as occurring among all the Arabis species on Mt. Ashland. A. divaricarpa is thought to be a hybrid between A. drummondii, which it closely resembles, and A. holboellii, which has very similar habitat requirements. Mt. Ashland A. divaricarpa was first included in A. drummondii var. interposita, then A. divaricarpa var. interposita. Hitchcock et al. (vol. 2, p. 445) stated that:

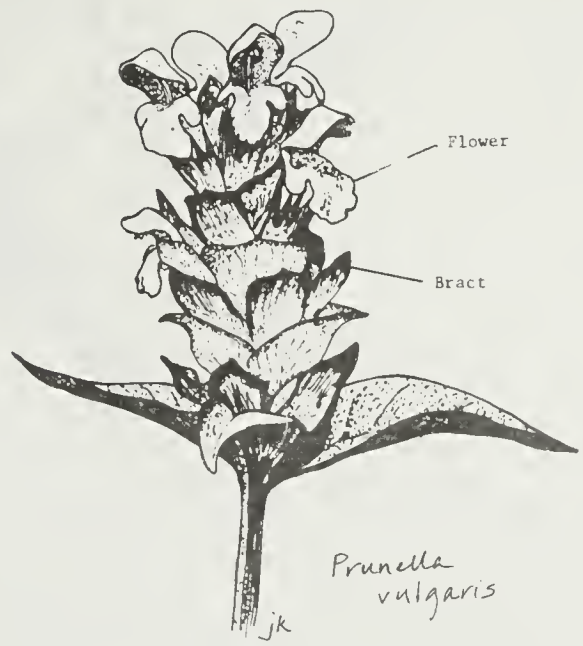
> "...there is sufficient transition between the three taxa (Arabis divaricarpa, A. drummondii, and A. sparsiflora) to indicate that interbreeding is not uncommon, and if they had distinctive ranges it would probably be more feasible to treat them as geographic races of a single species."

In addition, Arabis lyallii used to be considered merely an alpine form of A. drummondii.

With all this confusion, it is surprising that all Arabis species on Mt. Ashland are morphologically distinct, but they are. However, considering the overlap in flowering seasons of the species, and the behavior of bees such as Andrena nigrocaerulea, it is quite possible that hybridization could occur between sexually reproducing populations of these species.

In closing, let me briefly answer the questions posed at the beginning of this essay. Yes, hybridization does occur in Arabis. It is expected between sexually reproducing plants which are similar enough to produce fertile hybrids, or between plants whose hybrid progeny can overcome sterility by agamospermy. This latter situation causes the taxonomist's nightmare, with many very similar forms or microspecies. The answer to the second question is that all the mixed Arabis populations I observed, excepting the adjacent Arabis aculeolata and A. modesta populations, were distinct, and there was always more than one kind of reproductive isolating mechanism.

Arabis is not the only genus in which several species may share the same locality. Examples I have seen include Castilleja, Arctostaphylos, Claytonia, Penstemon, Agoseris, and Ribes. It is always of interest to look for hybrids between sympatric species, and at the same time to try to discover how the species are dividing up the season and the environment to avoid hybridization and competition. Sympatric plants have become more than just pretty flowers to me. Like Darwin's finches, they are living examples of the fine tuning of the evolutionary process necessary for the coexistence of a great variety of forms.



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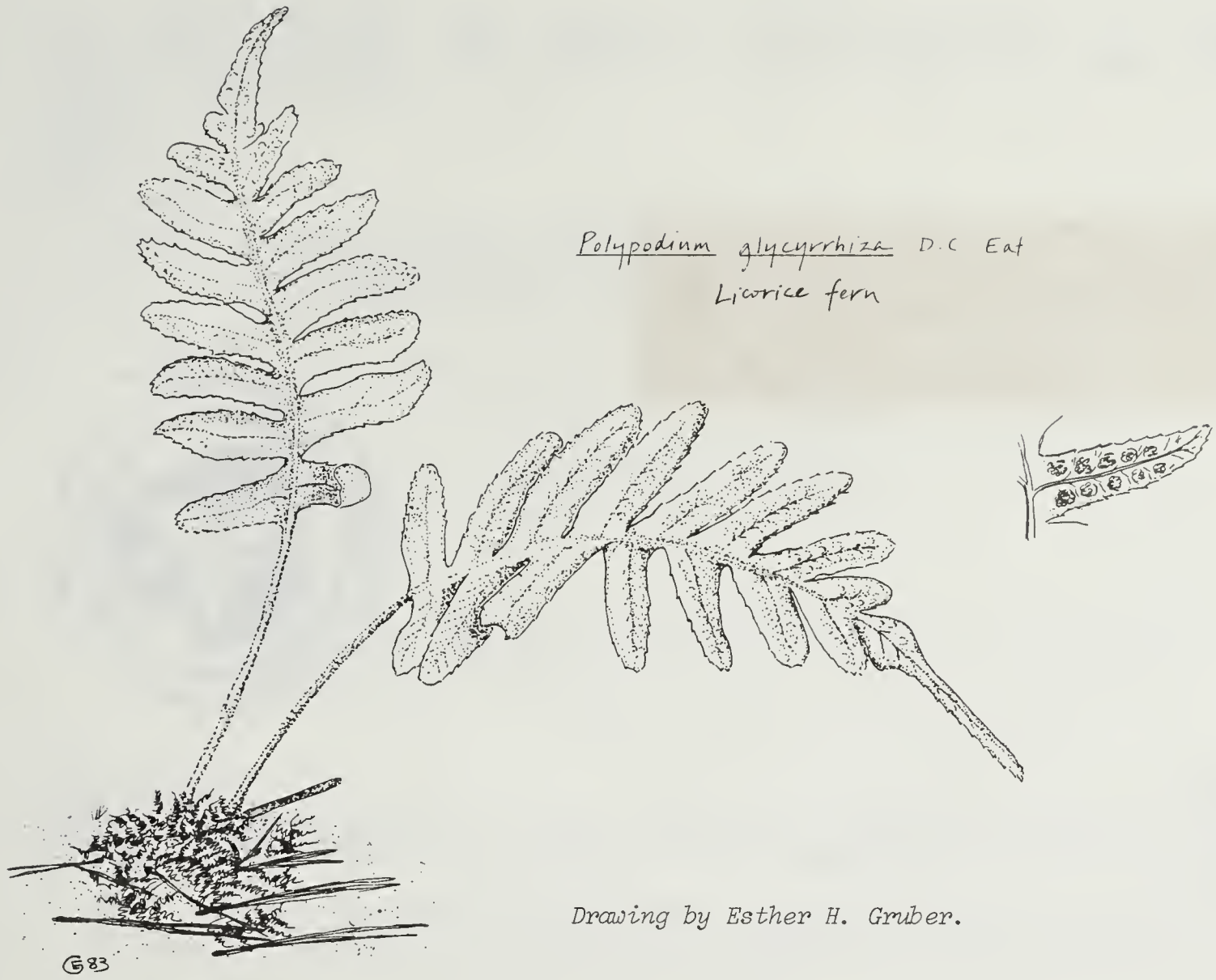
* *

Opuntia polyacantha...



Drawing by Esther H. Gruber.

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The NPSO Bulletin is published monthly by the Native Plant Society of Oregon, which is incorporated under the laws of the state of Oregon. All are welcome to join the Society. Membership applications, from the preceding page or provided by Chapter presidents, should be sent to: Mary Falconer, 1920 Engel Ave. NW, Salem, OR 97304. Changes of address, including old address & zip code, should also be sent to Mary Falconer. Bulletin copy is due by the 10th of the month, and should be sent to the Editor, 11505 SW Summerville Ave., Portland, OR 97219; or call 636-4112.

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Bulletin of the
NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 10 October 1984

CHAPTER NEWS

Blue Mountain

--- For information about October activities, call Chapter President Harry Oswald, 276-1241 (days).

Corvallis

8 Oct., Mon. Meeting, 7:30 p.m., Rm. 2087, Cordley Hall, OSU campus, Corvallis. MUSHROOMS & THEIR HABITATS IN CHINA, by visiting scientist Wang Yun.

27 Oct., Sat. Field trip--CASCADES MUSHROOM FORAY. Leave from parking lot at NE corner of Cordley Hall at 7:00 a.m. Call Dan Luoma, 758-8063, for details and car pool arrangements.

Emerald

1 Oct., Mon. Meeting, 7:15, Multipurpose Rm., N Craft Bldg., Amazon Community Center. BIOLOGICAL CONTROL OF TANSY RAGWORT, by Cathy Macdonald.

High Desert

--- For information about October activities, call Chapter President Marge Ettinger, 382-2255.

Mid Columbia

3 Oct., Wed. Meeting, 7:30, Mosier School.

Portland

Our field trip meeting place is the K-Mart at NE 122nd & Sandy Blvd. (exit I-84 at 122nd northbound and meet at the south end of the parking lot). If you have any questions about a field trip, please call the leader or Doris Ashby, 245-2977.

6 Oct., Sat. CASTLE CANYON. THIS TRIP HAS BEEN CANCELLED.

11 Oct., Thurs. Meeting, 7:30 p.m.,

9 Oct., Tues. Meeting, 7:00 p.m., First United Methodist Church, SW 18th & Jefferson, Portland. Two subjects: ENDANGERED & CANDIDATE PLANT SPECIES OF THE SOUTHEASTERN U.S., by Andy Robinson, staff biologist and Section 7 coordinator, U.S. Fish & Wildlife Service; POPULATION STUDIES OF THREE SISKIYOU MOUNTAINS IRIS, by Carol Anne Wilson, currently of the USFWS staff.

13 Oct., Sat. What is blooming at this time of the year in the DUNES & DESCHUTES RIVER AREA? Meet at K-Mart at 8:00 a.m. or the Portage Inn at The Dalles (last exit) at 10:00 a.m. Leader: George Lewis, 292-0415.

20 Oct., Sat. Come & learn all you ever wanted to know about NW conifers, & enjoy good views of Mt. Hood. This moderate hike will be in the ELK MEADOWS-BLUEGRASS RIDGE area. Meet at K-Mart at 8:00 a.m. or at Zigzag Ranger Station at 9:00 a.m. Leader: Jean Siddall, 636-4633.

27 Oct., Sat. Take a late fall hike to MIRROR LAKE & TOM DICK MOUNTAIN. This trail gains 1700 ft. in 3½ miles, with great views from the top. Leader: Dave Dobak, 643-2213.

Siskiyou

11 Oct., Thu. Meeting, 7:30 p.m., Rm. 171, Science Bldg, SOSC. Wendell Wood, president of the Oregon Natural Resources Council, will give a presentation on wildflowers of southern Oregon, featuring EIGHT DOLLAR MOUNTAIN.

Willamette Valley

--- For information about October activities, call Chapter President Larry Scofield, 787-3833.

MT. PISGAH MUSHROOM SHOW
OCTOBER 28

The last Sunday in October is again the date of the Mt. Pisgah Arboretum annual MUSHROOM SHOW & PLANT SALE.

As in the past, the day will feature cider pressing, guided trail hikes, refreshments and the sale of dried and living plants.

Highlight of the event will, as usual, be the display of approximately 200 local mushroom species. These are always stunningly arranged on beds of moss, lichen and autumn foliage. Each mushroom species will be labeled with its name and other pertinent information. Freeman Rowe and his students at Lane Community College will prepare the show.

And this year a brand new 76-page wild mushroom cookbook will be for sale at the show.

The Mushroom Show is absolutely free, so come out to the Mt. Pisgah Arboretum near Eugene-Springfield on Sunday October 28, 10:00 to 3:00 for this outstanding event.

INFORMATION NEEDED FOR TILLAMOOK PARKS PLAN

The Oregon State Parks planning staff is preparing master plans for parks and waysides along the coast of Tillamook County, including Oswald West, Nehalem Bay and Cape Meares State Parks, and Neahkahnie-Manzanita, Manhattan Beach, Rockaway Beach, Twin Rocks, Oceanside Beach, and Neskowin Beach State Waysides. If you have information about the use of or resources on these park lands, please contact Nancy H. Gronowski, Project Manager, 373-1654, Parks and Recreation Division, Dept. of Transportation, 525 Trade St. SE, Salem, OR 97310.

When land use plans and preliminary development plans have been completed, public hearings will be held to solicit public response. These hearings are expected in late October or early November.

MARK YOUR CALENDARS!

Plans are beginning to take shape for the 1985 Convention for Western Native Plant Societies. By the first of the year Registration Information should be in the mail. This will cover such items as programs, available housing, food, field trips, etc. As of now three field trips, choice of any one, are planned for the first day, to be followed by dinner and an evening program.

Remember to reserve the dates, August 2, 3, & 4 for an enjoyable weekend at La Grande, Oregon!

Ruth M. Hansen
Chairman

BOARD MEETING OCT. 6

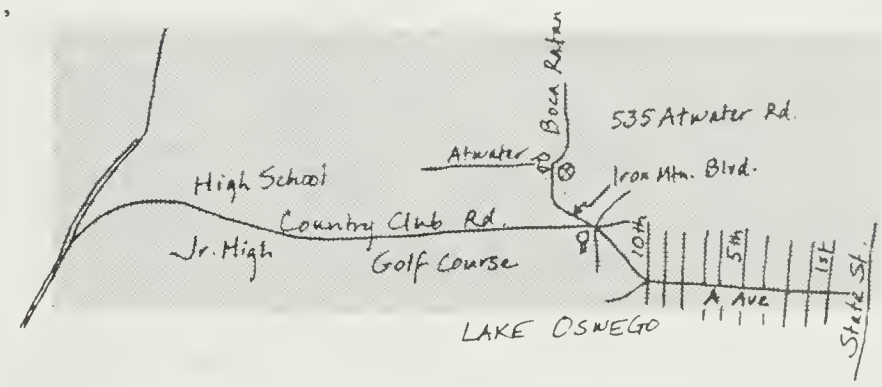
NPSO's state board will meet October 6, 1:30 p.m., at Jean Siddall's house (which also houses the Oregon Rare & Endangered Plant Project), 535 Atwater Drive, Lake Oswego (see map). Some of the more important items on the agenda are appointment of a new legislative committee chairman, discussion of the 1985 joint meeting of western native plant societies, and flower show ethics guidelines. All members are welcome. Be there!

Coming S on I-5 from Portland:

Turn off at Terwilliger exit
Stay on Terwilliger until it dead ends at Macadam/State Street
Turn right on State St.
At 2nd light, turn right on A Ave.
At stop sign on 10th St., take right hand fork "to Country Club Rd."
At next intersection 6 streets come together--turn onto Iron Mtn. Blvd., the street immediately right of Country Club; follow signs "to Red Fox Hills"
Stay left at top of rise where a street goes off to right
535 is third house on right as you drop down hill--gray house w/ shingle roof (if you have to turn right or left, you've gone too far)

Coming N on I-5 from Salem:

Turn off at Lake Oswego exit
Go through Lake Grove; turn right onto Country Club Rd.
Go to stop sign at end of golf course where 6 streets come together
Turn left onto Iron Mtn. Blvd. (the most lefthand turn you can make); follow signs "to Red Fox Hills"
Stay left at top of rise where a street goes off to right
535 is third house on right as you drop down hill--gray house w/ shingle roof (if you have to turn right or left, you've gone too far)



NATURE CONSERVANCY/DATA BASE/HERBARIUM TO SPONSOR RARE PLANT CONFERENCE

The Oregon Natural Heritage Data Base, The Nature Conservancy, and the University of Oregon Herbarium will be sponsoring a statewide rare plant conference at the U of O in Eugene on the weekend of November 3-4. One purpose of the conference is to receive comments and field data preparatory to updating the plant portion of the publication "Rare, Threatened and Endangered Plants and Animals of Oregon" which will be reprinted around January, 1985. Other workshop topics will include rare plant/endangered species legislation for the state of Oregon, a discussion and computer demonstration of the Data Base and its activities, and an overview of the Berry Botanic Garden's cryogenic seed bank.

We hope all botanists with knowledge and interest in Oregon's rare taxa will be able to attend. If you do plan to come please contact Curt, Jimmy, or Sue for further details at:

Oregon Natural Heritage Data Base
1234 N.W. 25th Ave.
Portland, Oregon 97210
(503) 228-9550

BLM PUBLIC COMMENT OPPORTUNITIES

Several BLM documents are now available for public review and comment. Copies of the published documents are available from the BLM state office in Portland, or from the appropriate BLM District office.

MEDFORD-- Medford (district-wide) land use plan amendment decision record for proposed Areas of Critical Environmental Concern (ACECs) will be ready for a 30-day public review period starting in late September.

MEDFORD-- Medford (district-wide) draft supplemental timber management environmental statement (EIS) will be ready for a 60-day public comment period starting in late September.

PRINEVILLE-- Two Rivers resource management plan (RMP) summary of proposed alternatives was made available for a 30-day public comment period starting in September. Closing date for comments is Oct. 9.

SPOKANE-- Spokane draft resource management plan/environmental impact statement will be ready for a 90-day public comment period starting in early October.

FLOWERS FOREVER

by Rhoda Love

FOR THE SAKE OF OUR PLANTS,
WE MUST HAVE A CHANGE

As your Conservation Chairman I feel it is important for me to write to you about our choices at the polls on November 6.

If you are like me, you may have mixed feelings about our choices for a national leader for the next 4 years. Many issues, such as economic and foreign policies, military build-up and social services seem to be increasingly complex and difficult to fathom. However, in one important area, the record of the present administration has been so abysmal that the choice seems crystal clear. That area is the environment.

NPSO members, I'm certain you realize that it is no coincidence that the greater part of the work and correspondence that monopolized my time as your president from 1982 to 1984 was concerned with lack of protection for plants on federal land.

Even though James Watt is gone, the policies of the present administration continue. The Bureau of Land Management, custodian of most of our federal lands east of the Cascades and a large percentage of our forest, has, in the last 4 years, increasingly ignored its responsibility to protect rare plants.

The listing of endangered species at the federal level has slowed in the last 4 years to the point where, if the present pace is allowed to continue, it will take 94 years to review the information on plants and animals which need protection now! Meanwhile it is estimated that 7 or more species become extinct in the US each year!

For the first time in its politically active but bipartisan history, the Sierra Club has endorsed a national political party. The Club's letter to the Democrats reads in part: "Our commitment to (the environment) mandates that we take a stand when confronted by a President whose first-term actions contain so blatant and tragically consistent record of opposition to the environmental interests of the United States."

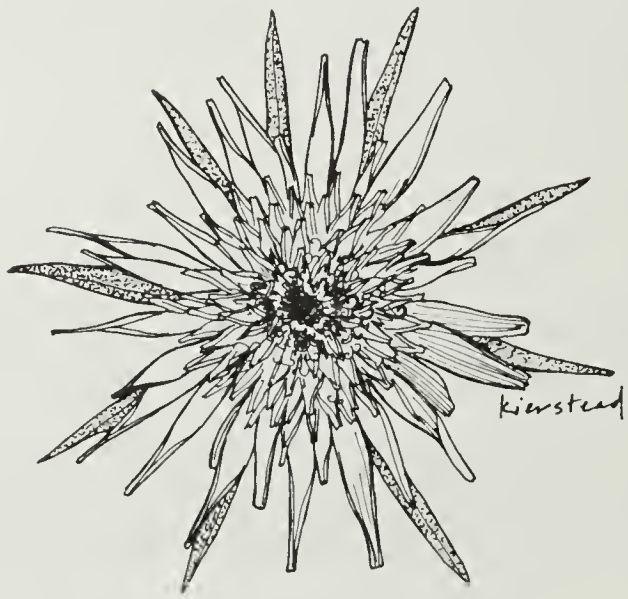
Walter Mondale's platform includes the following statement regarding the use of public lands: "This nation of ours should not be up for sale...When it comes to our resources, the standard by which this generation must be judged is not how well we use our inheritance for ourselves, but how we honor our debt to our children."

Here in Oregon we are faced with a Bureau of Land Management which has no full-time botanist working in the enormous Vale, Burns or Lakeview districts. Where protection for our federally listed Stephanomeria malheurenses seems desultory at best. Where selling of land parcels and timber cutting are proceeding without the mandatory plant inventories. Where use of seasonal botanists has dropped to a tiny percentage of what it was 4 years ago. And where in 10 years only 3 species out of hundreds have been placed on the list of federally protected plants. All of the above are the direct result of policies of the present administration.

NPSOers, it is time for a change. And it's up to us to make our voice heard. If we do not reverse this trend now, the damage which can be done in another 4 years is frightening to contemplate. Please consider our country's endangered plants and habitats when you make your choice at the polls on November 6.

Flowers Forever,

Rhoda Love,
Conservation Chairman



Tragopogon porrifolius L.
Salsify: European origin, established in disturbed places in the Northwest

R/E News

There are several exciting new "first records in Oregon" found this summer to report this month, along with a name change for one of the R/E plants.

Veva Stansell & Julie Kierstead found *Carex gigas* in April, at Winton Prairie on Sourdough Trail, Curry Co. According to Munz, Philip A., *A California Flora*, this species was previously known only from Plumas, Trinity, & Siskiyou Counties, California. It is listed as "rare, but not endangered" in the 1980 California R/E list.

Steve Shelly, botanist for Lakeview BLM this summer, found *Mimulus latidens* near Wool Lake, NE of Adel in Lake County. The known range for this little annual, according to Muna, is Butte & Lake Counties, California, to San Diego.

In July, Dennis Vroman discovered yet another California species, *Eriogonum lobbii*, in Josephine Co. His account is as follows:

"The Todd Creek drainage of the Galice Ranger District on Siskiyou National Forest has always been interesting to me. There is a lot of diversity in the plants in this area, which include species such as Brewer's spruce, *Picea breweriana*. In late July, 1984, I had stopped to look at clumps of *Dicentra formosa* var. *oregana*, when a woolly-leaved, ground-hugging plant next to it caught my eye. After thirteen years of rambling throughout the Galice area, this plant was new to me. Time did not permit a complete search of the area, but one quick glance revealed no similar plants. Because of this, I took only one basal leaf and one yet unflowering stem for further study at home.

"After spending some time trying to identify this plant, I sent it to Dr. Kenton Chambers at Oregon State University Herbarium. Dr. Chambers tentatively identified it as *Eriogonum lobbii*, an alpine plant known from the Sierra Nevada of northern California, but never collected in Oregon before. He asked that a complete plant be sent if the population could tolerate it. Well, the possibility of collecting a "first in Oregon' seemed quite an occurrence.

"I returned on August 6, and before I arrived at the original location, I found more plants well above the road cutbank, in bloom no less. The original population was also in full bloom and exceedingly pretty. There were numerous plants in the rocky shallow soil of this barren gabbro ridge. In digging a plant for Dr. Chambers, I was surprised to see its thick, woody taproot.

"The soil on the ridge was pumice-like, supporting remarkably few other plants. *Eriogonum lobbii* had very little competition. The only other species noticed around them was *Phacelia corymbosa*."

Mimulus latidens (Gray) Greene

Eriogonum lobbii T. & G.
Illustrations on this page from *Illustrated Flora of the Pacific States*, by Leroy Abrams

NAME CHANGE: The scientific name for *Asarum caudatum* var. *viridiflorum* Peck has been changed to *Asarum wagneri* Lu and Messler, honoring Professor Warren H. Wagner, Jr. of the University of Michigan. The name change was published in *Brittonia*, 35(4), 1983, pp. 331-334. Please change the name on your R/E list.

There have undoubtably been other "first records in Oregon" found this summer. Let us hear from you.

Jean L. Siddall
State R/E Chair

Conservation Alert

SIDALCEA NELSONIANA TO BE DROWNED BY WALKER CREEK DAM

Sidalcea nelsoniana, endangered throughout its range and a candidate for listing under the Endangered Species Act, was recently discovered in the wetlands at Walker Creek Flats, in the Coast Range near McMinnville. The site is owned by the Bureau of Land Management, which plans to allow dam construction by the City of McMinnville Dept. of Water and Light. The dam would create a reservoir covering the wetland, and the Sidalcea. The Walker Flat wetland is heavily used by elk and other wildlife.

The Salem District of the BLM prepared an Environmental Assessment rather than an Environmental Impact Statement. Botanical inventory of Walker Flat was was not done by BLM staff members, but rather was performed under contract by CH_2M Hill of Corvallis. The inventory did not note any plants of concern. A later visit to the site by John Hauser, an employee of the Salem BLM District, turned up a population of Sidalcea. Specimens sent to OSU have been positively identified by Kenton Chambers as S. nelsoniana.

There is an alternative site available for this project. Hydrologists' recommendations, which were available during the early planning stages of the project, suggested that the dam be built on Haskins Creek, which drains east, on City of McMinnville property. The resultant reservoir would be on city land, not on BLM and private land, would not affect the Walker Creek area, and would leave the fisheries of the Upper Nestucca unspoiled.

WHAT YOU CAN DO: Write or phone to express your concern to William Leavell, state director of the BLM, and to Bill Blum, City Engineer and Director of Public Works, McMinnville. Ask why the dam and reservoir are not sited on city property. Copies of your letters should go to Senators Hatfield & Packwood, and to Rep. Les AuCoin, if you are his constituent.

William Leavell
Bureau of Land Management
P.O. Box 2965
Portland, OR 97208
(503) 231-6251

Bill Blum
City Engineer & Director
of Public Works
230 E 2nd
McMinnville, OR 97128
(503) 472-9371

AWARDS RECEIVED FOR WILDERNESS WORK

For their interest in and work toward establishment of the Table Rock Wilderness Area, several Portland Chapter members were given awards by the Bureau of Land Management and the Oregon Natural Resource Council. Jeanne Huffstutter, George Jeffcott, and Ruth Hansen were each given ONRC's Volunteer Service Award and a BLM Certificate of Appreciation, at the August 25 dedication ceremony for the Table Rock Wilderness Area.

RARE BIRD & PLANT HABITAT THREATENED BY OFF-ROAD VEHICLES

The Nature Conservancy describes the Lily Lake (Berry Creek to Sutton Creek) estuarine area, seven miles north of Florence on the central Oregon coast, as an "outstanding ecological and scenic resource" with "more diversity of natural systems available at this site" than at many other coastal sites.

Yet despite the objections of botanists from around the state, the Mapleton District of the Siuslaw National Forest has continued to allow off-road vehicles to run over sensitive plant and animal habitat without restriction.

The Nature Conservancy states that "approximately 20% of the state's threatened coastal population of non-migratory Western Snowy Plovers utilize the beach adjoining the lake." Additionally, several rare plants, which the Forest Service is obligated to protect, grow on a dune meadow deflation plain and on the surrounding dunes. These include bog club moss, Lycopodium inundatum, and the even more sensitive pink sandverbena, Abronia umbellata var. acutalata, previously reported from only three localities on the Oregon coast. Freshwater deflation plain-associated species that are being affected by off-road vehicles include the leathery grape fern, Botrychium multifidum; chatterbox orchid, Epipactis gigantea, hooded ladies' tresses, Spiranthes romanzoffiana; and the insectivorous sundew, Drosera rotundifolia. Also adversely affected is a small salt marsh along Berry Creek with associated species including a diminutive species of arrow grass, Triglochin striata.

According to recent sensitive plant surveys conducted by a Forest Service Biological Technician, Dennis Woolington, "Most of the clubmoss colonies have had ORV traffic across them and there has been some mortality of individual plants. Some of the saturated flats have been disturbed enough that any Lycopodium colonies have been eliminated or precluded from establishment." With regard to the very rare Abronia the Forest Service reported, "No impacts were observed because Abronia umbellata was not observed."

Despite having recently issued a special use permit to a commercial stables (adding an additional impact to the area), the Forest Service has so far refused to close the Lily Lake dune area (Berry Creek to Sutton Creek) to offroad vehicles.

WHAT YOU CAN DO: Please write Forest Supervisor Larry Fellows, Siuslaw National Forest, P.O. Box 1148, Corvallis, OR 97330, and request that the Lily Lake to Sutton Creek area be permanently closed to off-road vehicles. Most importantly, send copies of your letters to Senators Bob Packwood and Mark O. Hatfield (Senate Office Building, Washington, D.C. 20510).

Wendell Wood
Oregon Natural Resources Council

GRASSY KNOB WILDERNESS AREA DEDICATION

An old lookout site a few miles east of Port Orford was the scene August 18 of a ceremony dedicating Grassy Knob Wilderness Area. About thirty people gathered on the rocky summit, an area of about twenty by thirty feet, bounded by vertical drops and impenetrable brush.

Grassy Knob Wilderness Area, on Siskiyou National Forest, ranges in elevation from a hundred to 2600 feet. It covers 17,000 acres of steep, rugged hills, mostly forested. It will be under the management of Siskiyou National Forest.

Jim Rogers, President of the Kalmiopsis Audubon Society, discussed historical background of the area. Early uses by the Indians included hunting, acorn gathering, and trail route. The lookout was built in 1942. In September of that year a Japanese plane circled the lookout, was fired upon by lookout personnel, and dropped incendiary bombs, none of which ignited. The lookout was abandoned after the war.

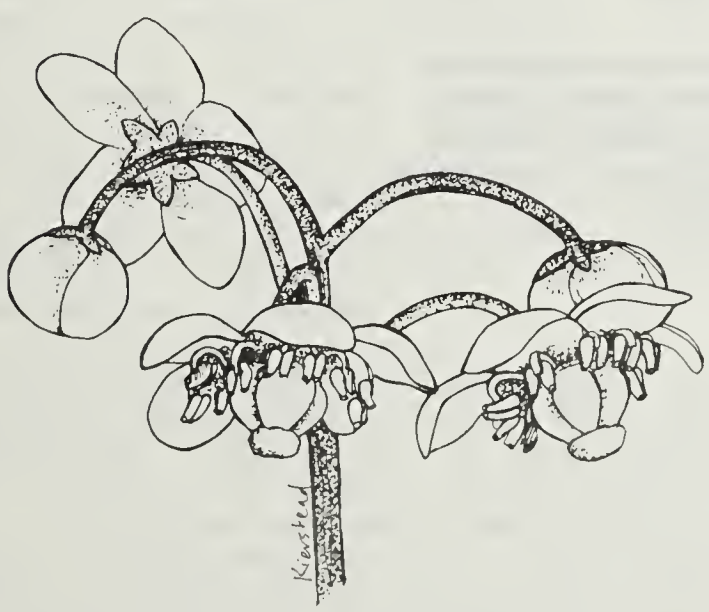
Ron McCormack, Supervisor of Siskiyou National Forest, pointed out that this is not a typical wilderness area in that its importance lies in protection of fisheries, watershed, and water quality rather than scenic or recreational values.

James Monteith, Executive Director of the Oregon Natural Resources Council, described the designation as a good beginning, and a challenge to those who would like to see an additional 12,000 acres in the area protected in the same way or managed for the same values.

Larry Stone, Director of Pacific Fisheries Enhancement Corporation (a public non-profit corporation), expressed his group's support for the designation, and that of the Coos County League of Women Voters.

It was an altogether enjoyable afternoon, for reasons including the meaning of the ceremony, the excellent weather, and the chance to visit with friends of like interests. The occasion was definitely a milestone in a long journey.

Veva Stansell
Siskiyou Chapter



Chimaphila umbellata (L.) Bart.
var. *occidentalis* (Rydb.) Blake

* * * * * *IMPORTANT ADDRESSES* * * * * *

Senator Mark Hatfield, Senate Office Building, Washington, D.C. 20510; (202) 224-3753 or (503) 221-3386.
Senator Bob Packwood, Senate Office Building, Washington, D.C. 20510; (202) 224-5244 or (503) 221-3370.
Congressman Les AuCoin, House Office Building, Washington, D.C. 20515; (202) 225-0855 or (503) 221-2901 or (800) 452-1920.
Congressman Bob Smith, House Office Building, Washington, D.C. 20515; (202) 225-6730 or (503) 776-4646 or (800) 533-3303.
Congressman Ron Wyden, House Office Building, Washington, D.C. 20515; (202) 225-4811 or (503) 231-2300.
Congressman Jim Weaver, House Office Building, Washington, D.C. 20515; (202) 225-6416 or (503) 687-6732.
Congressman Denny Smith, House Office Building, Washington, D.C. 20515; (202) 225-5711 or (503) 399-5756 or (800) 452-7889.
Governor Victor Atiyeh, State Capitol, Salem, OR 97310; (503) 378-3111 or (800) 452-7813.
Jeff Sirmon, Regional Forester, U.S. Forest Service, P.O. Box 3623, Portland, OR 97208; (503) 221-2877.
William G. Leavell, State Director, Bureau of Land Management, P.O. Box 2965, Portland, OR 97208; (503) 231-6273.
Richard J. Myshak, Regional Director, Fish and Wildlife Service, 500 NE Multnomah, Suite 1692, Portland, OR 97232; (503) 231-6171.
Daniel J. Tobin, Jr., Regional Director, National Park Service, Westin Building, Room 1920, 2001 6th Avenue, Seattle, Washington 98121; (206) 442-0170.

* *

Jean Davis Award

We regret to report that the 1984 winner of the Jean Davis Memorial Scholarship has reported that due to ill health he will be unable to enrol in school this fall. This means forfeiture of the scholarship. Since there were no other candidates for this scholarship this year, we will award two scholarships in the 1985 year. Scholarships are to be awarded to worthy students who have completed at least two years of satisfactory college work and are to be students in an Oregon college during the year they apply for the scholarship. Previous winners are eligible to apply and compete with other candidates. Please pass this information on to all possible applicants. Applications must be in to the scholarship committee not later than April 1 of the year for which application is made.

Mary Falconer
Chairman, Scholarship Committee

Cornus canadensis

Oregon Native Plant Portraits

Cornus canadensis L.

CORNACEAE: Dogwood Family. Some taxonomists consider our western bunchberry to belong to a separate species, *Cornus unalaschkensis* Ledeb., which is intermediate in appearance between the circumboreal *Cornus suecica* L. and true *Cornus canadensis*, which ranges across Canada and the eastern U.S.

OENOTHERA WOLFII IN OREGON

The occurrence of Wolf's Evening-primrose, Oenothera wolfii, in Curry County, Oregon, was recently verified from a collection made by Veva Stansell near the mouth of the Pistol River. This news, while not exactly earthshaking, adds a species to our state's flora and increases the known populations of a plant which is listed as "rare" by our neighboring state of California. Readers of this Bulletin may be interested in a brief resume of the history of Oenothera wolfii, which involves some famous botanists and some peculiar biological complexities. The story of this species, a kind of botanical "this is your life, Oenothera!", starts in a Dutch genetist's garden in the late 19th century, leads to Philip Munz (author of "A California Flora"), and ends with Peter Raven, the present Director of the Missouri Botanical Garden. The biological peculiarities include hybridization, self-fertilization, lethal genes, and ring-forming chromosomes.

The evening-primrose genus Oenothera is native to the New World, but during colonial times it was introduced into Europe as a popular garden flower. Extensive research on the genetics and mutability of garden oenotheras was done by Hugo de Vries in Holland, and in 1901 he published a monumental book titled "The Mutations Theory" which prominently featured the formation of numerous "new species" of evening-primroses out of the cultivated species Oenothera lamarckiana. De Vries's startling observations initiated over half a century of studies by plant geneticists, both in Europe and the United States, to discover how Oenothera could mutate to new, true-breeding strains that simulated the evolution of distinct species. A center for Oenothera research existed for many years at Indiana University under the direction of Ralph Cleland, and this became a major institution for the training of American plant geneticists. This humble garden flower therefore achieved high status as an experimental organism, comparable perhaps to the famous peas of Gregor Mendel and the fruit-fly Drosophila, which has dominated zoological research on genetics and evolution for seven decades or more.

The plant family Onagraceae, to which Oenothera belongs, is rich in numbers of genera and species in California, so it was natural for the taxonomist Philip Munz, a professor at Pomona College, to become interested in its classification. Working independently of the Oenothera geneticists such as Cleland, but with an awareness of their results, Munz eventually (in 1965) developed a classification of this genus in which 119

Oenothera wolfii (Munz) Raven, Dietrich, & Stubbe
Illustration from *Threatened & Endangered Vascular Plants of Oregon: An Illustrated Guide*, by Robert J. Meinke

species were recognized as occurring in North America including Mexico. He divided the more variable species, in turn, into subspecies. Very closely related to de Vries's original species O. lamarckiana, according to Munz, is O. hookeri, and it was as a subspecies of O. hookeri that Munz (in 1949) first described our plant of interest, Wolf's Evening-primrose. Its name, by the way, honors Carl Wolf, a southern California botanist and authority on the cypress genus Cupressus.

To understand why we now call Oenothera wolfii a species rather than a subspecies, one must be introduced (as gently as possible) to the genetic and evolutionary research that has been done with this genus. One basic finding has been that there are really two "kinds" of species in North American oenotheras--outbreeding ones and inbreeding ones. These terms describe the movement of pollen during the reproductive cycle of the flowers; outbreeders must trade pollen (via insects) between flowers of different plants, while inbreeders almost invariably place the pollen from the anthers onto the stigma of the same flower. There is a convenient correlation between petal size and pollinating method, with the outbreeders having petals up to 5 cm long and inbreeders having petals no larger than 2.5 cm. In the United States, inbreeding species of Oenothera related to O. hookeri are often very widespread and weedy, and it has been discovered that they have some peculiar genetic features which may contribute to their success as weeds. In botany manuals for various parts of the country, you will find these inbreeders referred to under the names O. biennis, O. strigosa (more correctly, O. villosa), and O. parviflora. Oenothera strigosa occurs in Oregon, as does O. hookeri and the escaped cultivated species O. glazioviana. Oenothera wolfii is an inbreeding species which, however, is rare and presumably endangered through competition and invasion of its habitat by the garden escape, O. glazioviana. Oenothera hookeri, on the other hand, is a large-flowered outbreeder.

All the oenotheras mentioned above have just 14 chromosomes in each cell nucleus, but these chromosomes sometimes turn out to be peculiarly "scrambled" by the process known as translocation. This scrambling occurs naturally, through spontaneous chromosome breakage. The odd thing is that ordinarily this process should be extremely deleterious to the plants, but rarely it works out that the translocated chromosomes can undergo normal cell division by linking arms, as it were, to form a ring with 14 segments. It appears to be a normal evolutionary process in Oenothera for numerous kinds of translocated chromosomes to arise (by mutation), for hybridization to assemble these scrambled chromosomes into new combinations, and for the fittest of these to survive and prosper under the test of natural selection. To be successful in nature, a new combination of chromosomes must be viable and fertile, must form a ring of 14 during gametic cell divisions, and must breed true by the process of self-fertilization. Studies of the inbreeding oenotheras, including O. wolfii, exactly confirm this prediction, since all of them form a ring of chromosomes, and all produce offspring exactly like themselves. Readers of this article may want to make an analogy to "cloning" and "genetic engineering," but remember that these innocent plants are only doing what comes naturally to them--peculiar as it may seem to us.

The many "new species" derived from Oenothera lamarckiana, which so excited Hugo de Vries, we can view in retrospect as arising by this same process, except that it happened in a garden and the crosses were between cultivated rather than wild plants.

The fascinating evening-primrose family continues to be under active investigation today, particularly by a team of researchers at the Missouri Botanical Garden led by Peter H. Raven. One outcome of this research has been to reclassify all Oenothera species using the genetic criteria described above, and in particular to trace the origins of the chromosomes found in each species. According to Raven, O. wolfii is genetically much like the ring-forming O. strigosa (O. villosa), but the two species have had separate, parallel evolutionary origins out of the ancestral, non-ring-forming species, O. hookeri. Oenothera wolfii can be told apart from O. strigosa in having slightly larger flowers, a longer floral tube, and a combination of villous and glandular hairs on its inflorescence. Whereas O. strigosa ranges from the Pacific Coast eastward to the Mississippi River, O. wolfii is localized in Humboldt and Del Norte Counties, California, and adjacent Oregon. It seems to be rare and is found only as small, scattered populations on dune areas by the ocean. Disturbance of its habitat by human activities, or even the competition of its more agressive relative O. glazioviana, may possibly endanger its long-term survival as a species.

What has been said above applies only to this one limited group of species within Oenothera, so not all plants--nor even all evening-primroses--can be accused of excessive mutability or bizarre reproductive habits. Research shows,

however, that among even the humblest of species there is much to be learned about the natural processes governing the diversity and adaptability of plants.

Kenton L. Chambers
Oregon State University

Rubus discolor Weihe & Nees
Himalayan blackberry: introduced from Eurasia

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The NPSO Bulletin is published monthly by the Native Plant Society of Oregon, which is incorporated under the laws of the state of Oregon. All are welcome to join the Society. Membership applications, from the preceding page or provided by Chapter presidents, should be sent to: Mary Falconer, 1920 Engel Ave. NW, Salem, OR 97304. Changes o address, including old address & zip code, should also be sent to Mary Falconer. Bulletin copy is due by the 10th of the month, and should be sent to the Editor, 11505 SW Summerville Ave., Portland, OR 97219; or call 636-4112.

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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No.11 November 1984

READ THIS

USE THE ENCLOSED FORM FOR MEMBERSHIP RENEWAL!
Send both copies to Mary Falconer (address listed on form).
The ¼ membership is only usable for the last three months of the year: October, November, and December. It is not usable for partial, inactive, year-long membership.
If membership is not renewed and dues paid by March 1, 1985, the NPSO Bulletin will stop coming to your address.

CHAPTER NEWS

Blue Mountain

--- For information about November activities, call Chapter President Harry Oswald, 276-1241 (days).

Corvallis

12 Nov., Mon. Meeting, 7:30 p.m., Rm. 2087, Cordley Hall, OSU campus, Corvallis. SPRING FLOWERS OF THE SCABLANDS, by Lucile Housley.

Emerald

5 Nov., Mon. Meeting, 7:15 p.m., Amazon Park Community Center, N Craft Bldg. Two multi-image slide shows, DAVID DOUGLAS-THE GRASS MAN, and THE KALMIOPSIS will be presented by Bob Cooper and Shirley Bridgham of SW Oregon Community College. See Douglas' life & travels as an early botanical explorer, and the unique landscape & plants of the Kalmiopsis country.

3 Dec., Mon CHRISTMAS SOCIAL, with refreshments and a slide pot luck--the best from this year's field trips; at Charlene Simpson's house, 1992 Lake Isle Drive, across from K-Mart off Goodpasture Rd., Eugene. The fun begins at 7:15 p.m. Call Charlene at home, 465-1059, or work 686-3221.

Mid Columbia

7 Nov., Wed.	Meeting, 7:30 p.m., Mosier School.

Portland

---	Our field trips will begin again in the spring.
13 Nov., Tues.	Meeting, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson. THE EASTERN MOJAVE, as Don & Dorothy Barr found it in the spring of this year. (Also we alert you to the Dec. 11 program of members' favorite slides; please be thinking of the dozen you can bring for this annual show.

Siskiyou

8 Nov., Thurs.	Meeting, 7:30 p.m., Rm. 171, SOSC Science Bldg. Dr. Frank Lang will give a slide program on the HISTORY OF BOTANICAL ART.

Willamette Valley

19 Nov., Mon.	Meeting, 7:30 p.m., First United Methodist Church, corner of Church & State Sts., Salem. A two-projector slide show on EIGHT DOLLAR MOUNTAIN & ITS ENVIRONMENTAL PROBLEMS, presented by Wendell Wood & Diane Kelsay of the Oregon Natural Resources Council, detailing the unique values of $8 Mountain & the threats posed to it by mining development.
---	There will be no meeting of the Willamette Valley Chapter in December.

* * * *

HELP! THE BULLETIN NEEDS ILLUSTRATIONS to liven up its pages. We welcome any original or non-copyrighted drawings of native plants or landscapes, as well as black & white or color photographs (no slides please). Any size up to 11 X 14 inches is OK. Materials will be returned to you if you ask.

CHECK OUT SOUTHERN MEXICO & GUATEMALA

WISTEC's November travelogue will begin in the city of Oaxaca, in southern Mexico, and travel south into the Guatemalan highlands, then east to the jungles and beaches of the Yucatan peninsula. The colorful markets, birds, ruins, and scenery of these regions will be shown in the slide and lecture presentation by field biologist Gail A. Baker. The program is on Tuesday, Nov. 27, at 7 p.m., at the Willamette Science & Technology Center, 2300 Centennial Blvd. in Eugene. Admission is $2 for adults, .75 for children, $1 for students and seniors. Also available will be lists of recommended reading, and camping and travel information.

CHINA'S FORESTS 1ST IN PORTLAND SERIES

The Nature Conservancy, a non-profit, private conservation organization, and the Western Forestry Center are cosponsoring their Third Annual Winter Natural History Programs. The first program will be held Tuesday, Nov. 13, 7:30 p.m. in Forest Hall at the Forestry Center in Portland. All programs in this series are free and open to the public.

The first program, entitled CHINA: ITS FORESTS, is a fascinating look at the forestry practices in China, offered by Bob Torheim and Merle Lowden, retired Foresters who recently completed a tour of China's forests. In a slide presentation, they will explore the influences of the Chinese culture on their forestry practices and the extremely labor-intensive efforts being made to recover from the impact of the Cultural Revolution. Bob Torheim, a retired Regional Forester, now serves as the regional representative of the American Forestry Association, the nation's oldest conservation organization. Merle Lowden, a former Chief of Fire Management in Washington, D.C., has recently retired as Editor of Western Forester magazine and now operates a small tree farm.

BLM PUBLIC COMMENT OPPORTUNITIES

Copies of published documents are available from appropriate district offices.

BURNS: The John Day final resource management plan/environmental impact statement will be available for a 30-day public review period in mid-November.

COOS BAY: The land use plan amendment decision record for the North Spit will be available for a 30-day public review period in late October.

MEDFORD: The Medford (district-wide) draft supplemental timber management environmental impact statement 60-day comment period closes in December.

OREGON STATE OFFICE: The Pacific Power & Light Eugene to Medford 500 kV transmission line record of decision will be available for a 30-day public review period in November.

CALL FOR PAPERS

Ruth Hansen, in the October Bulletin, asked the members of NPSO to set aside the dates of August 2-4, 1985, to attend the Convention of Western Native Plant Societies in LaGrande, Oregon. We are in the process of developing a program for the convention. There will be one or two round table or panel-type discussions, and several papers on individual research projects. This is an invitation to each member of NPSO to submit the title and a brief abstract of any paper that he or she could contribute to the meeting. Please send the appropriate information to:

Michael D. Fahey
215 Phoenix Way
Vancouver, WA 98661

John H. Hammond, DMD 1911-1984

After a brief illness Dr. John Hammond passed away September 12. He served as president of NPSO for 1974-1975 and his loss will be greatly felt by the Portland Chapter; for he was an outgoing, enthusiastic person, always ready to do his bit, to give a program, lead field trips, help with flower shows, or whatever in the interest of the Society.

During the winter months of the mid-1970s Dr. John was the main-spring for a bryophyte class which continued under his guidance for several years. Since his interest in mosses was so acute, he devised his own identification key, one which was easily used in the field as well as in the classroom. His enthusiasm and love for nature was overflowing and readily transmitted to others. I am glad to have known him and feel fortunate to have had the privilege of hiking mountain trails and botanizing with him.

In the shadows of the everlasting hills may peace be with you.

Ruth M. Hansen
Portland Chapter

HIGHLIGHTS OF OCT. 6 BOARD MEETING, 1984
Lake Oswego, Oregon

I Tour of the Oregon Rare & Endangered Plant Project office in Jean's daylight basement

II Board meeting presided over by President Dr. Franklin (Herm) Fitz:

1) Treasurer's report showed total assets of $5,869.
2) Conference for Western Native Plant Societies to be held at Eastern Oregon State College, La Grande, OR, Aug. 2,3,4, 1985. Chairman Ruth Hansen reported contacting eight states asking for participation in the conference and presentation of papers. Program chairman is Mike Fahey. A special committee of NPSO members will choose Oregon papers to be submitted to Mike's committee. Shep Wilson is chairman for brochures, which are due to be produced in Dec. Registration chairman is Mary Jane Fredricks. Field trip chairman is Andrew Kratz. Other chairmen needed: Hospitality, Displays, and Sales.
3) Wildflower poster: a committee has been studying the feasibility of NPSO producing a poster of Oregon native plants. Chairman Alan Curtis summarized efforts so far. Committee members Alan, Dave Wagner, and Leighton Ho will choose which 12 plants to use on the poster. The Board voted to commission Jay Wesley Miner (after seeing samples of his lovely wildflower portraits) to create the poster for a fee of $500. It is expected to be ready for sale in early 1985. Part of the production cost will be carried by NPSO, but money will probably have to be raised by private loans and advance sales.
4) Membership: Chairman Mary Falconer reported a total of 536 paid members. The Board decided to have a new roster ready to distribute at the '85 Annual Meeting.
5) Bulletin: Editor Julie Kierstead reported a need for a production assistant, and asked for several months' leave of absence in spring of 1985. She also asked for original or non-copyrighted drawings or photos (black & white or color prints--no slides) for use in the Bulletin. The Board approved purchase of a waxer for use in pasting up the Bulletin. Barbara Fox has volunteered to produce an index to past Bulletin articles, one year at at time.
6) Legislative committee: Esther McEvoy has agreed to accept chairmanship. All chapter presidents are directed to appoint committees to help prepare a bill for Jan. '85 legislative session, and to notify Esther ASAP who her committee will be. Call or write her at 3290 SW Willamette, Corvallis, OR 97333; 754-0893.
7) Conservation chairman Rhoda Love needs chapter conservation chairmen from a few chapters still. Barbara Fox has volunteered to be NPSO's coordinator of BLM Desert Wilderness issues. Barb wants to hear from NPSO members willing to visit one or more Wilderness Study Areas next year.
8) Note cards: Rhoda Love reported that Gaylee Goodrich has finished 4 drawings. Card packets will contain 8 cards of pastel paper, 2 each of

Please turn to page 6

FLOWERS FOREVER
by Rhoda Love

ENDANGERED PLANTS, WILDLIFE AND HABITATS
NOW OFFERED PROTECTION
IN EUGENE AND IN LANE COUNTY

On September 10, the Eugene City Council adopted the 1984 Eugene Community Goals and Policies. Three days later, on September 13, in Salem, the Land Conservation and Development Commission (LCDC) accepted the Lane County Land-Use Plan. Although newspaper reports of these events did not reveal the fact, both documents contained language that will offer protection to rare and endangered plant species and to threatened wildlife and habitats.

During the past year, a few Eugene consevationists have worked with the city and the county to insert protective language into these documents.

Rhoda Love of the Native Plant Society of Oregon and Carol Cogswell of the Eugene Natural History Society were almost single-handedly responsible for the writing of and final acceptance of amendments to the Environment Section of the Eugene Goals and Policies document which read:

> "Preserve areas of the city that are important natural habitats for rare, threatened and endangered plants and animals and for a diversity of wildlife." and

> "Take the necesssary land use actions to preserve identified significant natural habitats and establish a process for identifying and protecting additional areas."

The city process took almost a year starting on January, 1984 when Love and Cogswell were invited by the city Planning Commission to attend the Community Goals Conference. Love proposed protection for the city's rare plants and wrote to Planning Commission Chair, Dorothy Anderson, with a list of 5 rare and endangered species known to occur in the city. When Love's proposal did not appear in the first draft of the Goals document in April, Cogswell joined the fray and she and Love with the help of Steve Gordon drafted the amendments and gathered petition signatures to put the amendments on the agenda.

At the April 21 session of the goals conference, the Love-Cogswell amendments were tabled for lack of time!

At a public hearing on May 22 Love and Cogswell were joined by David Wagner, Leighton Ho, Gaylee Goodrich, Herb Wisner, Dan Gleason, and Alan Copsey who all spoke in favor of the Love-Cogswell amendments. As a consequence of this fine turnout, the amendments were accepted by the Planning Commission on June 14---but the struggle was not over.

At an unannounced August 13 work session, the City Council changed and weakened the amendments. Cogswell was out of town, but Love learned about the changes and fired off a strong letter to the City Council.

Love and Cogswell then attended the final City Council meeting on September 10 and spoke up for their amendments. Council members Ruth Bascom, Cynthia Wooten and Emily Schue backed up Love and Cogswell and the amendments then carried by a Council vote of 6 to 2 with mayor-elect Brian Obie and Councilor Dick Hansen opposed.

While the above was going on at the city level, the County plan was also being studied by conservationists including Gwynne Schultz and Sidney Herbert of the Lane County Audubon Society, Dorothy Anderson, Rhoda Love and Jim Hutchison of the Oregon Dept. of Fish and Wildlife.

Love, acting from her then position as state president of the Native Plant Society of Oregon (NPSO), with invaluable help from Charlene Simpson, chair for endangered plants of the Emerald Chapter of NPSO, submitted a list of 27 rare and endangered and sensitive Lane County plant species and asked for county protection for these.

Commissioners Jerry Rust and Peter DeFazio directed the county planning staff to include protection for these species in the plan and this was done. Concurrently the Audubon and wildlife folks were writing protective measures for habitats, wetlands, birds and other wildlife. And the county has agreed to appoint a committee of wildlife experts to identify sensitive areas and species.

I believe Eugene and Lane county may be the only political units in Oregon with specific protection for rare and endangered species. Of course, we need statewide protection for these species and their habitats and the NPSO--under new state president Herm Fitz--hopes to introduce an Oregon Endangered Species Act to the '85 Legislature. With Eugene and Lane County leading the way, it is hoped that Oregon, like a number of other states, will soon offer protection to her unique plants and other wildlife.

STATEWIDE NPSO CONSERVATION NETWORK BEING ORGANIZED

A statewide NPSO Conservation network has now been established. At our Annual Meeting at Sunriver in June each chapter was asked to appoint a local conservation chair to report to Rhoda Love, state chair. To date the following have reported to Rhoda:

Wayne Rollie, Siskiyou
Mariana Bornholdt, Willamette Valley
Liz Handler & Jimmy Kagan, Portland
Stu Garrett, High Desert
Dan Luoma & Carolyn Wright, Corvallis
Veva Stansell, South coastal area

Barbara Fox, Portland Chapter, has volunteered to coordinate our study of the eastern Oregon desert BLM Wilderness Study Areas.

The Committee will function as follows: If and when Rhoda receives conservation alerts pertaining to a given area, she will notify the local chapter chairperson who will then be expected to investigate and take appropriate action. Local chairs will inform Rhoda of action taken or needed with regard to local issues and also send particulars to Editor Julie Kierstead for inclusion in the Bulletin. Our members can then respond with letters to appropriate agencies if necessary.

We will continue our close ties with such groups as the Oregon Natural Resources Council, the Natural Resources Defense Council, The Nature Conservancy, the Audubon Society, the Sierra Club, the Desert Sage Association and others who frequently alert us to cases where action may be needed to protect our native flora.

Members who learn of conservation matters, please notify your chapter conservation chair or write or call Rhoda whose address and number appear on the back of each Bulletin.

PROPOSED WETLANDS RESOLUTIONS

Resolutions similar to the following were recently passed by our Willamette Valley Chapter in Salem. They are an outgrowth of the work Mariana Bornholdt has done to preserve a Sidalcea nelsoniana site at Walker Flat near McMinnville (see NPSO Bulletin Vol. 17 # 10, p 6). Mariana has proposed that the NPSO state Board act upon these resolutions at its January meeting; they are published here for chapter discussion.

1. The Board of Directors of the Native Plant Society of Oregon affirms its support of the protection of wetlands and riparian habitats.

2. The Board of Directors of the Native Plant Society of Oregon believes that wetlands and riparian habitats in the state of Oregon are inadequately protected and that those which have unique and uncommon characteristics should be withdrawn from development and managed for protection of their plant communities and wildlife.

3. The Board of Directors of the Native Plant Society of Oregon endorses the position that the Walker Creek drainage in the Oregon Coast Range west of the city of McMinnville is a unique and exceptional wetlands meriting protection of its rare flora and unusual ecosystems.

---Rhoda Love,
Conservation Chair

Juniperus communis

LEGISLATIVE COMMITTEE REVITALIZED, PREPARING FOR '85 LEGISLATIVE SESSION

Esther McEvoy, former President of our Corvallis Chapter, is the new Chair of the NPSO Legislative Committee. Esther volunteered for the post of Legislative Chair in early October and began at once to read through an enormous pile of plant protection laws from every state on the U. S. with such a law.

NPSO plans to have an Oregon Endangered Species Bill ready to present to lawmakers when they convene in Salem in January for the '85 session.

ESTHER NEEDS OUR HELP!

Call or write to her at 3290 SW Willamette St., Corvallis 97333, 754-0893 to volunteer. We need letter writers, lobbyists, folks who can help draft legislation, telephone callers, legislation-watchers, and just plain helpers.

Watch the Bulletin for monthly reports from the Legislative Committee.

LET'S MAKE '85 THE YEAR OF PASSAGE OF THE OREGON ENDANGERED SPECIES ACT !!

Oregon's Desert: Help Wanted

TODAY, about 50% of Oregon is held by two multiple-use federal land management agencies: the Forest Service, in the Department of Agriculture, and the Bureau of Land Management (BLM), an Interior Dept. agency. Generally multiple-use land management agencies have interpreted their mandate to include commercial exploitation of resources while still providing rudimentary protection of a broad spectrum of public uses. While development of public resources has been the driving force of policy, the passage of the Wilderness Act made a notable exception. Wilderness lands are managed to protect and preserve natural values from exploitation and abuse. For instance, on non-wilderness lands, wildlife populations can be, and often are, reduced to minimum viable numbers; but in wilderness wildlife is king.

The Wilderness Act is twenty years young and the acreage included in the National Wilderness Preservation System has steadily increased. With the passage of a new statewide Wilderness Act this past spring (see p. 7 of the July 1984 Bulletin), Oregon has thirty-eight Wilderness Areas, totalling more than two million acres. However, the BLM only administers 5,500 acres, the new Table Rock Wilderness in northwest Oregon. What this means is that virtually all Oregon's protected wilderness is forested or above timberline. Our deserts are not represented in the Wilderness System.

ALL THAT MAY CHANGE soon. Since 1976, the BLM has been inventorying and studying their lands for wilderness potential. The inventory phase of the review was completed in 1980. According to the BLM, it has 2.6 million acres, in 87 Wilderness Study Areas, that are substantially natural and provide outstanding opportunities for solitude or primitive recreation, the two prime criteria for protection under the Wilderness Act. The Bureau has been assessing these WSAs since 1980 in terms of manageability and suitability as wilderness. In normal fashion, the agency will present its study in draft form as an Environmental Impact Statement in spring of 1985. The study will be controversial. Ranchers will complain that even though grazing is allowed in Wilderness Areas they will be harmed because some rangeland improvements and livestock increases will not be tolerated. Miners will emphasize the nation's need for energy and mineral resources. Off-road vehicle enthusiasts will assert that motorized access to public land is an inalienable right, or ought to be.

Wilderness advocates will complain that allowing BLM to do the study was like putting the fox in charge of the henhouse. The Director of the BLM is an appointee of the anti-wilderness, sagebrush rebel Reagan administration. Wilderness proponents will emphasize the opportunities that Wilderness designation will afford for protecting native rangeland, rare species, revitalization of riparian zones, reintroduction of significant numbers of native birds and mammals.

Steep slopes, lack of water, and good fortune have left bits and pieces of eastern Oregon's natural plant and animal communities somewhat intact. In an industrialized, crowded, hectic world the worth of these islands in the sun is being reconsidered. Viewed from any perspective, the resolution of this ultimately political issue is one of the most significant public lands conservation concerns of this century. Every citizen should be involved.

The Native Plant Society of Oregon is mounting an active campaign to conserve these outstanding wild areas in Eastern Oregon, which are the best and sometimes the only refuges for hundreds of imperiled native plant species. BLM, because of staff and funding cutbacks by the present administration, is acutely short of botanical expertise in Eastern Oregon BLM districts. NPSO is uniquely suited to the task of providing the BLM with sound botanical information: we have members all over the state, we are field trip oriented, and we are wedded to a strong conservation ethic. If you love the desert and its wildflowers, speak up now!

WHAT YOU CAN DO NOW

1) Contact Barbara Fox, NPSO coordinator for BLM Desert Wilderness activities. Write or call her at 11455 SE 35th, Milwaukie, OR 97222; (503) 659-2445

2) Get a copy of the BLM study. In addition to everything else, it is a nice reference work to the Public Lands resources of the state, and a guide to some of the nicest places to visit. Write to the State Director of BLM, P.O. Box 2965, Portland, OR 97208; ask him to put your name on the mailing list to receive a copy of the Wilderness EIS. You should get a card or some sort of acknowledgement of your request. If you don't, make the request again or contact your Congressperson.

Information for this article was provided by Sage Association, Inc., a non-profit, private, non-membership organization, established in 1982 to assist interested organizations and individuals regarding the BLM wilderness review. Its functions include coordination, technical assistance, & education. Donations are appreciated. For further information contact Don Tryon in John Day, (503) 575-2671.

* *

Continued from page 3

the 4 designs; to be ready by Christmas. The Board passed a motion to allow up to $1000 for card production costs. George Lewis agreed to take charge of distribution.

9) Dinah-mo Peak: The President read a request from the Oregon Natural Resources Council asking for support in their efforts to name this peak in the Mt. Jefferson Wilderness Area in honor of Dinah Beth Ross. It was discussed by the Board and a motion to support the effort was passed.

Jeanne Huffstutter
State Secretary, NPSO

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BULLETIN

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The NPSO Bulletin is published monthly. Copy is due by the 10th of the month, and should be sent to the editor. News, articles, photos, drawings, and non-copyrighted material are welcomed.

MEMBERSHIP

Membership Chair . . . . . Mary Falconer
1920 Engel Ave. NW, Salem, OR, 97304
Membership in the Native Plant Society of Oregon is open to all. Membership applications, from this page or from chapter presidents, should be sent to the membership chair. Changes of address, including old address & zip code, should also be sent to the membership chair.

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Welcome New Members

Corvallis Chapter
Gary A. Hunt
Nellie Mattingly

Emerald Chapter
Lora Schiltgen

Portland Chapter
William E. Connor
Charles & Mary Patton
Cascade Anderson
Elliot Geller
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Bulletin of the

NATIVE PLANT SOCIETY of OREGON

To increase the knowledge of members and public in identification and conservation of the native plants of the Pacific Northwest

Volume 17 No. 12 December 1984

* * * * * * IMPORTANT NOTICE * * * * * * *

PLEASE DON'T FORGET TO RENEW!! If you haven't already done so, use the enclosed form to renew your NPSO membership for 1985. NPSO brings you field trips, classes, entertaining programs, and an informative monthly Bulletin. 1985 will be an important year for Oregon's native plants, with state legislation in the works and an NPSO effort to provide information to the Bureau of Land Management on plants and plant communities in desert wilderness study areas. NPSO needs your support--we hope you will stay with us. (NOTE: The ¼ membership category only applies to the months October to December.)

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CHAPTER NEWS

Blue Mountain

--- For information about December activities, call Chapter President Harry Oswald, 276-1241 (days).

Corvallis

Dec. ?? SLIDE POTLUCK; date to have been set at November meeting. Call Dan Luoma, 758-8063, or Esther McEvoy, 754-0893, for details.

Emerald

3 Dec., Mon. CHRISTMAS SOCIAL, with refreshments and a slide potluck--the best from this year's field trips; at Charlene Simpson's house, 1992 Lake Isle Drive, across from K-Mart off Goodpasture Rd., Eugene. The fun begins at 7:15 p.m. Call Charlene at home, 465-1059, or work, 686-3221.

7 Jan., Mon. MEETING, 7:15 p.m., Amazon Park Community Center, north craft building. Dr. David Wagner, Curator of the U of O Herbarium, will speak on MOSSES.

High Desert

--- For information about December activities, call Chapter President Marge Ettinger, 382-2255.

Mid Columbia

5 Dec., Wed. Meeting, 7:30 p.m., Mosier School.

Portland

--- Field trips begin again in the spring. Watch next month's Bulletin for the schedule of winter workshops.

11 Dec., Tue. MEETING, 7:00 p.m., First United Methodist Church, 1838 SW Jefferson, Portland. WHO, WHERE, WHAT DID YOU SEE? The annual show of members' slides; bring 5 or 10 of your favorites. It's helpful if program chairman knows in advance how many to expect--call Louise Godfrey, 223-4785.

Siskiyou

13 Dec., Thur. MEETING, 7:30 p.m., Rm. 171, SOSC Science Bldg., Ashland. Peter Giffen will speak about USING NATIVE PLANTS IN PERMACULTURE GARDEN DESIGN.

Willamette Valley

--- There will be no meeting of the Willamette Valley Chapter in December.

ARCHAEOLOGY OF OREGON OUT

The Bureau of Land Management has published Archaeology of Oregon, a 142-page synthesis of information the agency has assembled in its cultural resources management program in the state, according to William C. Leavell, BLM Oregon-Washington state director.

Dr. C. Melvin Aikens, University of Oregon, wrote the book for BLM, tracing prehistoric civilizations, their life styles, habitations, weapons, food gathering, migrations, and unique traits.

Archaeological specimens from the Oregon State Museum of Anthropology on the University of Oregon campus were photographed for the book. Maps are also included, showing archaeological sites and areas roamed by prehistoric peoples.

Detailed chapters include the Great Basin, Columbia Plateau, Lower Columbia and Coast, Willamette Valley, Southwestern Mountains, and Ancient Oregon Cultures in Perspective.

Copies of the book are available for $7 from BLM, P.O. Box 2965, Portland, OR, 97208; BLM district offices, university book stores, and historical museums.

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2ND NATURAL HISTORY PROGRAM SET

RIVERS IN THE SAGEBRUSH ZONE is the second offering in the Nature Conservancy/Western Forestry Center 1984 natural history series. Former Bellingham Herald-News Environment and Science Editor, Dan Guthrie, explores the effects of land management on the Columbia Basin watershed. Author of A Mouse is Miracle Enough, natural history essays, Dan is presently a Sea Grant recipient chronicling salmon for OSU. This slide show will be held at Forest Hall, Western Forestry Center, at 7:30 p.m. on Tuesday, Dec. 13. It is free and open to the public.

BLM PUBLIC COMMENT OPPORTUNITIES

SPOKANE: The draft Spokane Resource Management Plant/Environmental Impact Statement public comment period closes December 31.

MEDFORD: The Medford district-wide draft supplemental timber management environmental impact statement 60-day public comment period will close in late December.

BURNS: The final John Day Resource Management Plant/Environmental Impact Statement will be available for a 30-day public review in mid-November.

OREGON/WASHINGTON STATE OFFICE: The Pacific Power & Light Eugene to Medford 500 Kv transmission line record of decision will be available for a 30-day public review period in late November.

DESERT STUDY CLASS OFFERED BY MFS

STUDY, CAMP, & HIKE in DEATH VALLEY, the MOHAVE & SONORAN DESERTS while FLOWERS bloom and BIRDS & BEES do their SPRING thing! Be a part of the new, exciting SPRING PROGRAM OF STUDY which tours AMERICA'S SOUTHWESTERN DESERTS for 5½ weeks and OREGON'S GREAT BASIN DESERT for 4½ weeks! Earn 12 semester hours (18 term hours) of either lower or upper division, transferable college credit through the MALHEUR FIELD STATION of PACIFIC UNIVERSITY. CLASS LIMIT: 24 students (enrollment closes March 1). COST: $1750 (includes tuition, room, board, travel expenses in the field and class supplies). For more information, contact Dr. Ellen Benedict, 8106 SE Carlton, Portland, OR 97206; (503) 774-1233.

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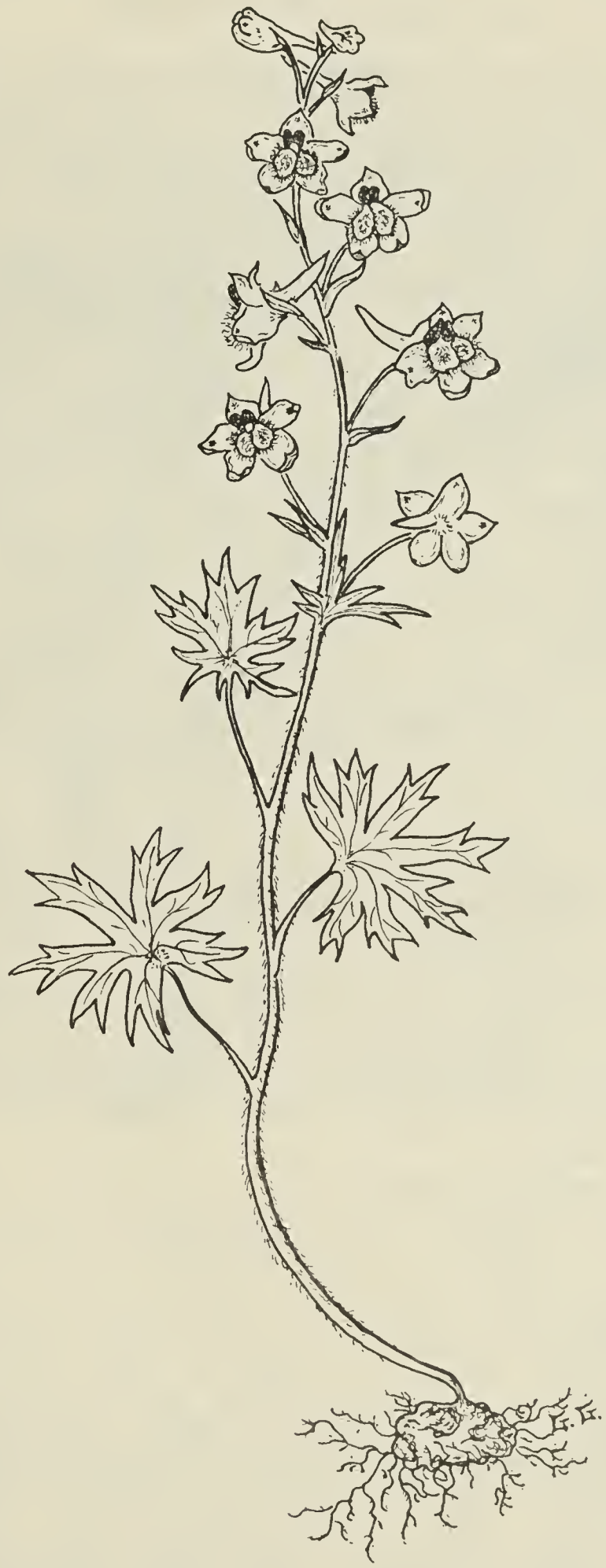


Delphinium leucophaeum
Pale larkspur
1985 notecards by Gaylee Goodrich

FLOWERS and Trees FOREVER

by Rhoda Love

PORT ORFORD CEDAR THREATENED BY FUNGUS, LOGGING PRACTICES

It isn't often that we here in Oregon find ourselves discussing endangered trees. Most of our rare and threatened plants tend to be less dominant members of ecosystems. However, we do need to be aware of the very serious threat to our Port Orford Cedar, and it may be fitting to discuss the problems faced by this lovely conifer in our December issue when evergreen trees have a special significance for many of us.

Port Orford Cedar (Chamaecyparis lawsoniana) is a handsome tree with spherical cones and fragrant scale-like foliage. On the undersides of its scale-leaves, the stomata form rows of white X's. Port Orford Cedar (also called Lawson Cypress) is a popular landscape species whose many nursery-developed varieties have been planted throughout the world.

In nature, Oregon's Port Orford Cedar is a strict endemic, occupying a narrow coastal stip approximately 40 miles wide in Curry, Coos and Josephine Counties in Oregon and in Del Norte and Humboldt Counties in California. In Oregon the trees are found on National Forest, BLM and private lands. At the present time, the species is fighting for its life against the attack of a root rot fungus which is inevitably fatal to any tree it attacks.

For approximately 30 years, the root rot fungus, Phytophthora lateralis, has been infesting C. lawsoniana in Oregon. The parasitic organism enters the trees via their roots, and the spores of the fungus are spread in the soil by water movement. The disease can also travel to adjacent trees by way of root grafts. Almost all long-distance movement of the disease can be traced to human activities--logging and road building. Once P. lateralis attacks a stand of Port Orford Cedar, death of all the trees follows. The only refuges where the cedar is at present free from attack are roadless areas.

Port Orford Cedar is subject to heavy logging activity because it is at present the most valuable timber tree in Oregon! Currently Port Orford Cedar logs are worth over $1000/board foot and virtually the entire harvest is shipped to Japan where the wood is used as a substitute for the wood of the rare hinoki cypress, a product which has spiritual significance to the Japanese. Where it is not harvested and where it has managed to avoid the root rot, Port Orford Cedar trees may live up to 500 years and attain a height of 60 meters.

The root rot, Phytophthora lateralis, belongs to the same fungal genus as the species which was responsible for the Irish potato blight. The origin of the root rot fungus is unknown, but speculation points to its being an exotic species perhaps from Asia. It is not known how it first made its way to Oregon, but it was originally noted in Port Orford Cedar nurseries in Portland and Seattle in the early 1930's. In 1944 the fungus was found for the first time in the natural range of the host tree when it was discovered attacking Port Orford Cedars in Coos Bay. Monitoring began in 1952 and the disease was found to be spreading south from Coos Bay along highways and roads. By 1959 the infestation had reached epidemic proportions and the spread continued to be associated with roads, waterways and campgrounds.

The fungus releases its swimming spores in the soil and these move to tree roots in the ground water. Water thus plays a major role in the spread of the disease as does soil movement and disturbance. Thick-walled resting spores enable the fungus to survive periods of heat and dessication. These spores can survive in mud and soil on the wheels the foresters' equipment and be moved from an infested area to an uninfested site in this way. It is not known how long the disease will survive in the soil in the absence of the host tree, and research is needed in this area. Fungicides have not been effective against the root rot in the wild.

By 1980 the root rot fungus had spread into California. The only Port Orford Cedar stands which have remained healthy and disease-free are those in roadless areas. The Forest Service could save some of these stands if they would write management plans specifically aimed at protecting the species. So far they have not done this. At present, the Service pins its hopes on the development of a disease-resistant strain of the cedar. However, the genetic work on the trees has just begun and development of a resistant form could take many years. What is badly needed now is a management plan which would set aside "quarantine zones" that would remain roadless, so that spread of the fungal spores would not take place. Steam cleaning of forestry equipment would also inhibit spread of the spores.

The Siskiyou National Forest is now preparing its 10-year land and resource management plan. The plans do not include rigorous management recommendations aimed at saving stands of Port Orford Cedar. For instance there are fairly large stands of Port Orford Cedar which are as yet uninfested with the root rot at Rock Creek and along the north and south forks of the Elk River in the Siskiyou National Forest.

Please turn to page 7

forestfarm®

Last summer I paid a visit to Forestfarm, Ray & Peg Prag's native plant nursery in southwestern Oregon. I have been sorely disappointed in the past at the number of native plant nurseries which depend on wild-collected plants for their stock. The Prags' nursery is different; all their plants are grown from seed or cuttings, and have good healthy root systems as a result. The Forestfarm catalogue lists literally hundreds of native plants, as well as unusual garden perennials, trees, and shrubs. Theirs is exactly the sort of enterprise which merits the wholehearted support of NPSO members. I have asked Ray & Peg to write about themselves and their nursery; here is what they have to say. JK

Forestfarm is a nursery born in 1973 from our wish to work together as partners in a rural environment. We wanted to live as much in harmony with nature as we could, while making a creative contribution to at least a small part of the world.

Ray has a B.A. in Botany and a M.S. degree in Horticulture, and this basic foundation has certainly been helpful. However, it seems that many things just have to be learned the hard way (i.e. by making mistakes!). After searching for two years for the right place to live (while earning money working at U.C. Davis) we finally settled on 30+ acres in the Siskiyou Mtns. of Oregon, a botanically rich area which we love, slightly off the beaten path, but fairly centrally located for possible deliveries north and south.

We started as (and are still primarily) a wholesale nursery, although a few years ago we began to sell small "starter plants" (in 2"x2"x6" containers) at affordably low prices via mail-order (informative catalog $1.50). We now also have a retail area--Forest Flower--where larger (1- and 5-gallon) as well as smaller sizes of a wide assortment of plants (nearly 1000 kinds) are available to anyone interested in stopping. The plants we sell (all grown from seed or cuttings--not collected) fall basically into three categories. We started, and will continue, to specialize in Western Native Plants because we respect them as the best means for revegetation in the West, as well as for low maintenance, natural landscapes. For our more widely dispersed mail-order customers we are now also growing many plants native to other parts of the country as well. Our second specialty arose from the fact that we believe in plants which are useful or which help to make people more self-sufficient...plants for bees, birds and wildlife, dyeing, nitrogen-fixation, wild fruit, etc. The third group is composed of worthy but uncommon ornamentals which should be more widely planted (including several hundred kinds of perennials).

We're always looking for new plants to try as well as experimenting with new techniques or propagation and growing. Currently, (in addition to fighting local land developers and working for Mondale, etc.!), we're putting out plantings of natives, wild fruit and uncommon ornamentals. These will eventually serve as our source of propagules as well as becoming a small Arboretum where visitors can see and learn about a wide variety of plants.

Clarkia rebicunda
Photo by Donald W. Dimock

Despite long workdays and work-weeks filled with the responsibilities of caring for many thousands of "babies", we can't think of a more satisfying way for us to spend a lifetime.

RAY and PEG PRAG

990 Tetherow Road
Williams, Oregon 97544-9599
(503) 846-6963 (Keep Trying)

Conservation Alert

PUBLIC HEARING ON BEACH CLOSURES COMING

The Oregon Natural Resources Council has petitioned the State of Oregon to close 34 miles of beach and eight natural estuaries to off-road vehicles (ORVs) on the central and southern Oregon coast. These areas have been identified by the Oregon Department of Fish & Wildlife (ODFW) as critical habitat for threatened and endangered animals such as the snowy plover, bald eagle, Aleutian Canada goose, brown pelican, and peregrine falcon.

In addition, at least two rare plant species grow on the southern Curry County coast. Phacelia argentea (silvery phacelia) is a Curry County endemic, threatened throughout its very small range; it is a candidate for listing under the Federal Endangered Species Act. Abronia umbellata ssp. breviflora (pink sandverbena) has declined alarmingly in the last decade, and is now considered endangered throughout its range; only two sites are known in Oregon, and it has vanished from most of the northern California coast, where it was more common. This plant will very shortly be proposed as a candidate for Federal protection.

The Greggs Creek dunes, one of the areas proposed for closure to vehicles, is a small but lovely remnant of Oregon's native dune communities (see pages 8-9 of the November 1983 Bulletin for a description of these communities). The Greggs Creek site has a fine population of Phacelia argentea, and little European beachgrass (Ammophila arenaria).

Sutton Beach (north of Florence), also proposed by ODFW for year-round vehicle closure, provides one of the most important nesting and wintering sites of the state-threatened snowy plover on the Oregon coast. Off-road vehicle use has greatly accelerated in recent months. ODFW stated, "If we lose the breeding birds (snowy plovers) that use the area the wintering population may soon follow. Without the Sutton/Berry Creek are the species will probably be lost on the coast."

Presently most of southern Oregon's beaches and estuaries are open to ORV use; yet, increased use by ORVs threatens soil, vegetation, and wildlife.

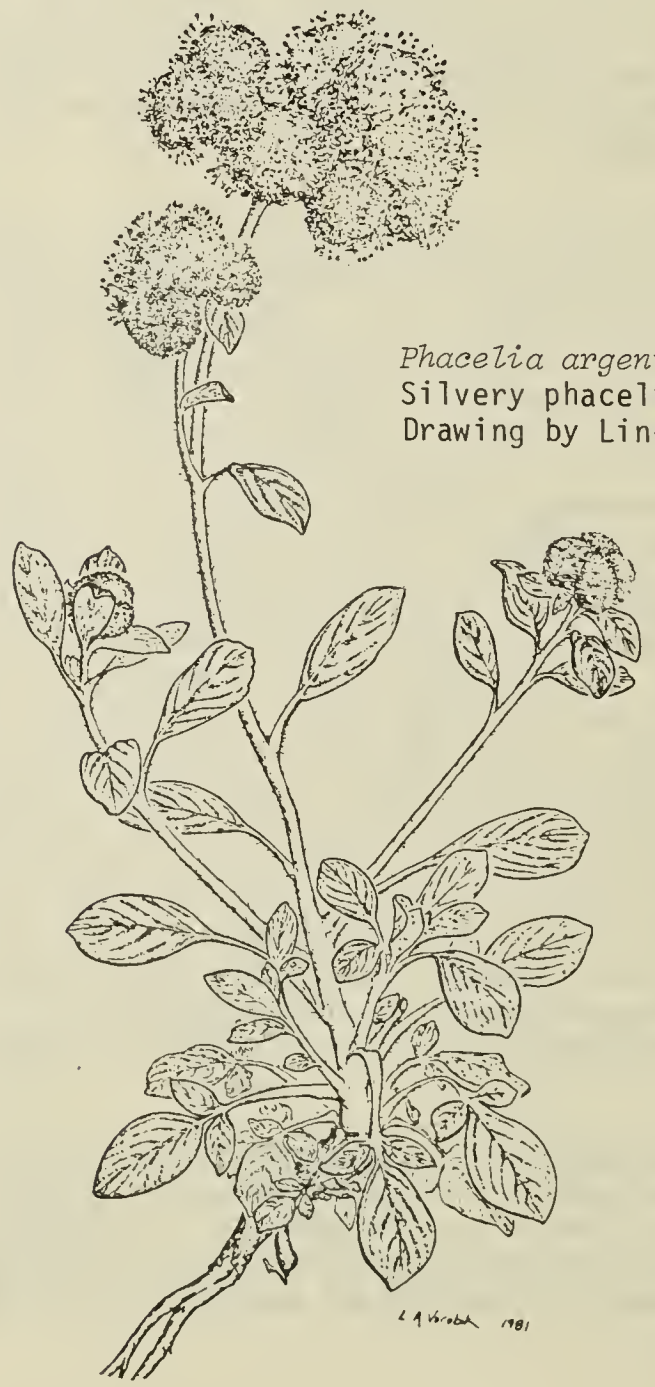
At press time, a specific date for a public hearing had not been set. The hearing will probably be on the 19th or 20th of December, in Coos Bay. Please plan to attend if you can. Carpools will be set up. For an update, a description and map of the proposed closures, and carpooling information, please call state Conservation Chair Rhoda Love, 345-6241; or call ONRC's Eugene office, 344-0675, ONRC NW Field Coordinator Nancy Peterson in Portland, 224-0201, or ONRC SW Field Coordinator Mark Prevost in Ashland, 482-4356.

Arching stalks of somnolent fiber
Rays of light cast ever less obliquely
Profound stirrings welling from within
Rising tufts of green
Atop delicately drooping racemes of white
Indian plum
Irrepressible signal
Of Spring's triumphant unfolding

Peter Kendall

WHAT YOU CAN DO NOW:

1) ATTEND the public hearing in Coos Bay. Your testimony can be short--most important is that you be there.
2) WRITE a letter supporting ONRC's and ODFW's proposed beach closures to Mr. Dave Talbot, Dept. of Transportation, 525 Trade St. SE, Salem, OR 97310, and ask that your comments be included in the hearing record. Please send copies to your State Senator and Representative.



Phacelia argentea
Silvery phacelia
Drawing by Linda Ann Vorobik

JACKSON-FRAZIER WETLAND: SHOULD IT BE?

Jackson-Frazier, that wetland northeast of Corvallis where the chirp of the cricket obscures the roar of traffic, hit the Benton County political fan in late August. If the County has its say, this 131 acre wetland with one of the finest known populations of the candidate endangered species Lomatium bradshawii, will receive no protection under state wide planning. The issue is before the Land Conservation and Development Commission on December 13-14 and is a classic case of the politicization of planning. Your testimony will help protect this oustanding natural area.

Benton County, confronted by overwhelming evidence on the ecological, open space, and wildlife values of this soggy haven of wetland plants, agreed that the tract is a significant natural area, an important wetland, and critical habitat for sensitive plants. And then promptly denied those very values. A speculative developer bought the wetland last June knowing of a significant public interest in the wetland and a planning cloud over its development. Indeed, the LCDC, Corps of Engineers, Division of State Lands, Fish and Wildlife Service, T & E plant specialists, wetland experts, bird enthusiasts, and plain citizens all have pressed for protection of this parcel under statewide planning Goal 5. Yet the developer, claiming primacy of housing, has threatened Benton County with a "takings" issue suit if the County were to do what they must under statewide planning. And that is to develop a planning program under Goal 5 which would assure protection of the sites's resources. In the face of threat, the County Board of Commissioners crumpled.

County officials, after struggling mightily with the facts, decided that politics was safer than planning. Afterall, this was two months before election. They admitted that "there is a significant interest in public acquisition of the wetland." But beyond this expression of the public value of Jackson-Frazier, the officials decided the only way to protect was public purchase. They propose to establish a fair market value for the land, offer to purchase the property from the developer under a fifteen month moratorium on change of use. During this moratorium, the County hopes to collect contributions toward purchase and then submit a a tax levy measure to the electorate no lat er than November, 1985 covering the outstanding balance to complete purchase.

Nothing about Goal 5. Nothing about planning. Nothing about protection in the long or short run. Instead, the Commissioners chose to defy statewide planning in their solution to the Jackson-Frazier wetland protection problem. If the levy fails, what then? Protection? What binds the developer, whose only object is housing, to an option to sell to the County? To agree with a fair market price? To not harm the resources? What protection after the levy? Who is to say how to manage the property after the moratorium? A turkey farm? A llama farm? Afterall, it is still zoned for exclusive farm use, but for how long?

At its December 13-14 meeting, the Land Conservation and Development Commission will consider Benton County's compliance with Goal 5. Now is a critical time. Will it be houses? PLANT LOVERS, BIRD ENTHUSIASTS, WETLAND BUFFS, NATURAL AREA TYPES, CONSERVATIONISTS, ENVIRONMENTALISTS -- LET YOUR VIEWS BE KNOWN. CALL 378-4926 AND ASK FOR THE PROPOSED LCDC DECEMBER MEETING AGENDA. SPEAK UP!

Bob Frenkel

Lomatium bradshawii
Bradshaw's lomatium
Drawing by Natalie Geiger

Continued from page 4

These areas were not included in the Grassy Knob Wilderness Area and any timber sales in these areas would undoubtedly result in infestation of the entire drainages. (Butler Creek, Dry Creek and Anvil Creek support some Port Orford Cedar and were incuded in the Grassy Knob Wilderness, but local conservationists feel that the elimination of Rock Creek and Elk River from the proposed Wilderness may have serious consequences for the cedar.) Uninfested drainages are extremely important as they can serve as génetic storehouses for the species.

Only the Forest Service has the opportunity to set aside these Port Orford Cedar protection areas. The National Forest Management Act requires forest planners to consider such action to maintain forest diversity. NPSOers, please request, read carefully,. and evaluate the management plans for the Siskiyou National Forest and indicate to the Forest Service and to your elected representatives your concern for the survival of Port Orford Cedar.

Reference: Lawson, T., Management of Port Orford Cedar and its Influence on Phytophthora Root Rot, CHEC Res. Paper 13, 1983

My thanks to Veva Stansell of Gold Beach and Jim Rogers of the Port Orford Audubon Society for their help.

(Editor's note: see also Jimmy Kagan's article on "Port Orford Cedar Forests", in the December 1983 NPSO Bulletin)

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Acid Rain

ACID RAIN is a popular term describing precipitation--rain, snow, fog, mist, dew--whose acid content has been increased by human activity. It is the result of burning fossil fuels such as coal, oil, and natural gas in power plants, industrial facilities, and automobiles, which produces emissions of sulfur oxides and nitrogen oxides. These oxides then undergo acid-forming chemical changes in the atmosphere and are transported, often great distances from where they were first emitted, and fall as acid rain.

Acid rain was first recognized as a serious problem in Scandinavia. As early as 1955, increased acidity was noted in southern Norway and Sweden; soon the problem was widely acknowledged, as fish populations were reduced or eradicated in many Scandinavian lakes and streams. Concern in this country began mounting in the 1960's with loss of trout populations from Adirondack lakes in northern New York. The effect of acid rain on forests, grasslands, and croplands is now a real concern, with the possibility of significant economic loss from lowered productivity.

THE WEST COAST has long been assumed relatively free of acid rain, because the prevailing winds blowing across the western states, from west to east, from the Pacific Ocean, are free of the industrial pollutants that blow across the northeastern U.S. The one large coal-fired power plant in Oregon, at Boardman, is in the eastern part of the state, where soils are alkaline and from where emissions blow over to Idaho and beyond. Thus Oregonians, while not yet faced with acid rain, may be contributing to the problem elsewhere. To the south, recent studies have shown that precipitation in both southern and northern California is acidic. Rainfall in urban areas--San Francisco, San Diego, and Los Angeles--was particularly acidic, the pH of some storms being as low as 2.89, about the same as vinegar. The California Air Resources Board has concluded that California, in spite of its alkaline soils, is now facing ecosystem damage from acid rain. Losses include forests, fish, and crops. Likely culprits are the urban centers with their autos, refineries, and oil-fired power plants.

The soils of western Oregon and the Cascades, being acid or neutral, are very vulnerable to acid rain. Eastern Oregon, with its alkaline soils, has some natural buffering protection. Oregon's high lakes are the result of snow melt and are therefore mostly neutral in pH; and it has already been shown that the effects of atmospheric pollution are felt a long distance from their source. Our coniferous forests are especially vulnerable, since new needles are produced only at branch tips and old needles, once dropped, are not replaced. In western Oregon, we need only think of the rainfall upon which our agriculture is based. It is unthinkable what would happen if our rain turned to vinegar!

* * * * * * *

PHOTOS NEEDED BY POSTER ARTIST

Jay Miner, the botanical artist who is doing the artwork for NPSO's poster-in-the-works, would like to borrow color slides or prints of Lupinus cusickii, Mirabilis macfarlanei, and Dimeresia howellii, to help him render these plants accurately. Please send them to:

Jay Miner
39900 S. McCully Mt. Rd.
Lyons, OR 97358

* * * * * * *

HISTORY OF THE JEAN DAVIS AWARD

The Jean Davis Memorial Scholarship fund was established in August 1979 in memory of Jean Davis, who passed away while on a field trip in the Cascades with several other members of the Willamette Valley Chapter of NPSO.

Jean was a charter member of the Willamette Valley Chapter, and her husband felt this was the way he wanted to honor her. A request for donations to the fund in lieu of flowers was made and several sizable donations were received. Mr. Davis then increased the fund to $10,000 and a committee was formed to set up guidelines for the recipients of the scholarships.

After deliberations it was decided that the recipient must be one that will be attending an Oregon college, who plans to study plant systematics or plant ecology. The recipient is to have completed at least two years of satisfactory college work by July 1 of the year of application and be a full time student. Graduate students may be eligible if they meet all qualifications except that of being a "full time student". The award is in the amount of $1,000.00 and will be paid directly to the school of choice, to be used toward tuition within the following academic year.

Applications are available from Mary Falconer, Chairman, Scholarship Committee, 1920 Engel Ave. NW, Salem, OR 97304. They must be completed with all appropriate items listed and sent to the above address no later than April 1 of the year of application. The award will be made by May 1 and is usually disclosed at the annual NPSO meeting.

Since the establishment of the fund there have been some donations in memory of other NPSO members. Any donations will be gladly accepted and should the fund grow to the necessary size there could be additional scholarships awarded. In 1985 there will be two scholarships awarded, due to the fact that the 1984 winner was unable to avail himself of the award because of ill health. Since we had no other applicants the money will be used next year.

Mary Falconer
Willamette Valley Chapter

* * *

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MEMBERSHIP

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1920 Engel Ave. NW, Salem, OR, 97304
Membership in the Native Plant Society of Oregon is open to all. Membership applications, from this page or from chapter presidents, should be sent to the membership chair. Changes of address, including old address & zip code, should also be sent to the membership chair.

WELCOME NEW MEMBERS

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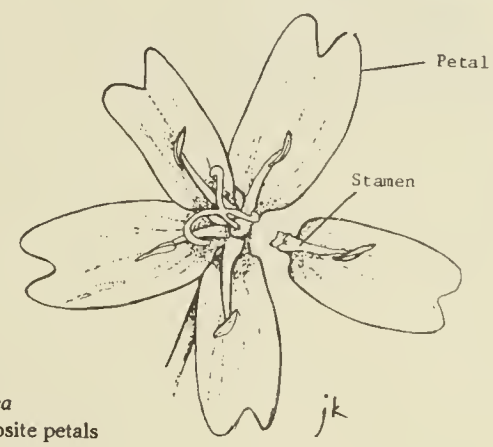

Montia sibirica
Stamens opposite petals

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